

LANGUAGE

JOURNAL OF THE LINGUISTIC
SOCIETY OF AMERICA

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VOLUME IV

1928

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KRAUS REPRINT CORPORATION

New York

1964

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INITIAL *sp* AND *st* IN HITTITE

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One of Hrozný's Hittite etymologies which may fairly be called obvious is the connection of *šipanti* 'he pours a libation' with Gk. σπένδει and Lat. *spondeo*¹. Hrozný, to be sure, translated the word 'opfert', and thus lost the most convincing item in the case. The precise meaning of the word was established by Sommer and Ehelolf², who, however, somewhat pedantically refused to recognize the IE etymology except by implication; they mentioned it only in a parenthesis, 'ohne damit der Verbindung mit σπένδειν das Wort reden zu wollen'.

Hrozný felt some difficulty with the vowel; he hesitated to trace Hittite *a* to original *e*, but he could not understand original *o* in a present tense which clearly did not belong to the same class as Latin *spondeo*. That difficulty has been removed by the demonstration that the Hittite *hi*-conjugation corresponds, in part, to the IE perfect.³

We have then a clear case of initial *šip* for IE *sp*. Hrozný saw that the inserted vowel was probably graphic only, since cuneiform characters cannot represent an initial consonant group. Hrozný probably based his opinion in part upon his understanding of *išpantuzzi* as a related verb of identical meaning (ib. 54⁴, 226). We now know⁴ that this word is dative-locative of a noun meaning 'libation'; but Hrozný's argument about the initial consonant group is still valid. Hrozný was also right in connecting with these words the form *išpatuzzelaš* 'one who pours a libation', which can now be recognized as a contracted form of *išpantuzziyalaš*⁵. We must, then, interpret *ši-pa-an-ti* as *španti* and *iš-pa-an-tu-uz-zi* as *špantuzzi*.

¹ *Die Sprache der Hethiter* 4¹.

² *Boghazköi-Studien* 10. 15 f.

³ Sturtevant, *LANGUAGE* 3. 161-168, 215-25 (1927).

⁴ See Ehelolf, *Kleinasiatische Forschungen* 1. 148 f. (1927).

⁵ See Tenner, *Ein Hethitischer Annalertext des Königs Mursilis II* 24.

I cannot cite another instance of initial *šip* for *šp*, but there is a very probable example of *šit* for *št*. In a report on the property of certain temples⁶ we have several times (1. 35, 2. 13, etc.) the item, 1^{GIŠ} KU *ši-it-tar-(ra-)za* UD.SAR-*za ú-nu-wa-an-za*. From the fact that UD.SAR means 'new moon' Hrozný conjectured the meaning 'star' for the abl. *šittar(ra)za*. Now that Sommer and Ehelolf⁷ have established the meaning 'adorn' for the verb *unu-*, we can translate the entire phrase: '1 weapon adorned with star and crescent'. There can be little further doubt that 'star' is the correct meaning. If so *šittar* (abl. *šittaraz*) is akin to Skt. *star-*, Av. *star-*, Gk. *ἀστήρ*, etc.

More frequently initial *šp* and *št* are written with a prefixed *i*, as in the case of *išpantuzzi*. The recognition of this fact discloses several striking etymologies.

The meaning of the verb *išpai* has just been established by Ehelolf⁸ as 'he satisfies himself with food, is filled'. A typical example is *KBo.* 4. 6. 1. 9 (addressed to a god): ^{URU}YĀ *e-īt nu-za iš-pa-a-i*, 'eat the fat, and be filled'. This must be the same word as Skt. *sphayate* 'he grows fat', *sphūtas* 'fat', Lith. *spėti* 'Erfolg haben', etc. The Hittite verb belongs to the third class of the *hi*-conjugation, and should be added to my list of such verbs with original *ēi*⁹.

The occurrences of the verb *išparriya-* have been collected and discussed by Friedrich¹⁰. It is frequent in ritual texts, where the object is ^{GIŠ}BANŠUR 'table', ^{GIŠ}lahharnuzzi 'sacrificial table'¹¹, or some kind of a cloth. The only meaning possible with all these objects is 'spread'. The inference is confirmed by the fact that the spreading of the table or of the cloth is frequently followed by putting bread upon it. The context is entirely different in *KBo.* 6. 34. 3. 27f.: *nu ú-wa-an-du a-pi-el URU-a[n ZAB.M]EŠ ^{URU}Hatti(ti) QA.TAM.MA GİR-ūt iš-par-an-du* 'let the soldiers of Hatti go (and) in the same way trample his city under foot'. Here too the proper meaning of the verb is 'spread'; but 'spread with the foot' will not go in English. A vocabulary treats of our word,

⁶ *Keilschrifttexte aus Boghazköi* 2. 1 = Hrozný. *BoSt.* 3. 1-27.

⁷ *BoSt.* 10. 74f.

⁸ *KF* 1. 137-42 (1927).

⁹ *LANGUAGE* 3. 219f. (1927).

¹⁰ *Zeitschrift für Assyriologie*, Neue Folge 3. 187-8 (1927).

¹¹ I do not understand Friedrich's hesitancy about the meaning of this word. The object so designated is covered with a cloth, and bread is put on it. It stands in much the same surroundings as the ideographic ^{GIŠ}BANŠUR, although the phonetic compliment of ^{GIŠ}BANŠUR-um (acc., *Keilschrift-Urkunden aus Boghazköi* 12. 65. 13) forbids us to identify the two.

but adds little to the inferences that we have drawn from the actual uses. The passage is as follows (*KBo.* 1. 42. 5. 4-5):

DAG = *ME.IŠ.TU.U* = *iš-par-ri-ya-u-wa-ar*

DAG = *ME.EL.TU.U* = ditto.

The ideogram may mean either 'spread out' or 'tear down'¹², and therefore harmonizes with the literal as well as with the figurative meaning of the Hittite word. Accadian *MEŠDU*¹³, however, means 'pressure', and so the author of the vocabulary must have had only the figurative meaning in mind.

With Hittite *išparriya-* 'spread' I would connect Gk. *σπερῶ* 'sow' *σποράς* 'scattered', Arm. *pharat* 'scattered, separated' MHG *sprāt* 'das Spritzen, Sprühen', etc. This root **sp(h)er-* has often been identified with that of Lat. *sperno* 'thrust away with the foot', Skt. *sphur-* 'vibrate', etc.¹⁴; but surely Walde-Pokorny¹⁵ are right in separating them. The primary meaning of our root is 'spread' and that is preserved in Hittite. The present suffix of Gk. *σπερῶ* reappears in the Hittite infinitive (cited above) and also in *iš-par-ri-iz-zi* (*KUB* 14. 1. 2. 91), if this stands for **išparrezzi*, the contracted form of **išparriyazzi*. In the third plural Hittite shows *išparranzi* and *išparandu*, which lack the *io*-suffix.

Initial *št* is written *išt* in three words whose apparent IE cognates are commonly traced to the root **st(h)ā-*. In *ištanta-* 'tarry, delay'¹⁶ I see Gothic *standan* from IE **stat-* with nasal infix¹⁷, 'stand'. It is not surprising to find the nasal infix in the Hittite infinitive (*iš-ta-an-ta-u-ar*); that is the case in other verbs also.

Hittite *ištapp*¹⁸ is frequent in ritual texts with the meaning 'cover'. A more vigorous and probably more primitive meaning occurs in the inaugural address of Hattuššiliš¹⁹. We have just been told that when Hattuššiliš defeated the 'helpers' of the enemy, the enemy fled. The text continues: URU.HAL.HI.A-ma *ku-i-e-eš ŠÁ KÚR URUHa-at-ti išt tap-pa-an-te-eš e-še-ir nu-kán GUL-hi-eš-ki-ir*, 'however what cities of Hatti had been held in subjection, took up arms'. Even more

¹² See Barton, *The Origin and Development of Cuneiform Writing* 127.

¹³ See Bezold, *Babylonisch-Assyrisches Glossar* 183b. The Hittites often confused *d* and *t* in Accadian as well as in their own language.

¹⁴ References in Boisacq, *Dictionnaire Étymologique de la Langue Grecque* 894.

¹⁵ *Vergleichendes Wörterbuch der Indogermanischen Sprachen* 2. 668-72.

¹⁶ See Weidner, *Studien z. Hethitischen Sprachwissenschaft* 66; Tenner, *HAT* 20.

¹⁷ See most recently Walde-Pokorny, *VWIS* 2. 603.

¹⁸ Sommer and Ehelolf *BoSt.* 10. 56f; Götze *Hatt.* 80f.

¹⁹ *KBo.* 3. 6. 2. 24-5 = Götze 18. 41-2.

definite is the meaning of *išapp-* in another passage of the same document²⁰: *na-an-kán I.NA URUŠá-mu-ha ŠAH GIM-an hu-u-um-ma EGIR-pa iš-tap-pa-ás*, 'and she shut him up in Šamuha like a pig in a sty'. Compare *KBo.* 6. 29. 2. 33-4 (Götze 50): *a-pu-u-un-ma-kán 𐎶IŠTAR URUŠá-mu-ha GAŠAN.YA HA-un GIM-an hu-u-pa-la-za EGIR-pa iš-tap-ta*, 'him, however, Ištar of Šamuha, my Lady, held back as one does a fish with a net'. The verb occurs in a mutilated passage of the *Law Code*, where it seems to mean 'store away (sheaves in the barn)'²¹. A similar meaning is probable in *KBo.* 5. 11. 4. 14: *nu LÚ.Ú.KAB GISDUP.HI.A an-da iš-ta-a-pt*, 'the UKAB stows the tablets away within'.

We can scarcely be wrong in connecting this word with the Skt. causative *sthāpayati* 'he arrests, restrains' and also 'he stores up, keeps'. It follows that the causative force was originally carried by the 'root-determinative' *p*, and that the Skt. 'causative suffix' *aya* was due to the analogy of other verbs. Traces of the earlier situation are preserved in the Skt. reduplicated aorist *atišthipat* 'he caused to stand', etc. Consequently *sthāpayati* should be added to the list of Skt. causatives with inherited *p*.²²

The Hittite deponent verb *išduwari* (pret. *išduwati*) 'becomes known'²³ is nearly equivalent to Gk. *στεύται* in *Il.* 3. 83. When Alexander volunteered to engage in single combat with Menelaus, Hector rushed before his forces and checked their advance by grasping his long spear in the middle and pressing them back. He had not yet made any signal to the Greeks, when Agamemmon saw what he was doing, and shouted to his men:

ἰσχεσθ', Ἀργεῖοι· μὴ βάλλετε, κούροι Ἀχαιῶν·
στεύται γάρ τι ἔπος ἐρέειν κορυθαίολος Ἑκτωρ,

'Cease, Argives; do not shoot, warriors of the Achaeans; for it seems that Hector of the flashing helm will speak'. Later Greek employs *φαίβεται* and the infinitive in this sense. In several passages *στεύται* has been translated 'boast, claim (that he will)', and some scholars would connect it with Skt. *stauti* 'he praises'.²⁴ It is difficult, however, to derive the meaning of *στεύται* in *Il.* 3. 83 from this; probably we should everywhere interpret the word as we must do in the latter

²⁰ *KBo.* 3. 6. 3. 66-7 = Götze 32. 25-6.

²¹ See Hrozný, *Code Hittite* 124. 8.

²² See Brugmann, *Grundriss der Vergleichenden Grammatik der Idg. Sprachen* 2^a. 3. 256.

²³ See Friedrich *ZA NF* 3. 198 and fn. 2 (1927).

²⁴ See references in Walde-Pokorny, *VWIS* 2. 620.

passage, i.e., 'he looks as if he will' or the like. The close correspondence of the Hittite deponent *išduwari* with the Greek deponent *σεῦραι* in the meaning '*palverai*' establishes that as the primary meaning. More distant connection with Goth. *stiurjan* 'establish', Skt. *sthūras* 'thick', and the IE root **st(h)ā* 'stand' is probable, but without bearing upon our present etymology.

The postposition *ištarna* 'between, among'²⁵ has by-forms *ištarni* and *ištarniya*, which suggest that the word was originally a noun. I have shown²⁶ that in *katta(n)*, *katti* 'with, together, down' we have accusative and dative-locative of a noun meaning 'hand'. In *ištarna*, *ištarni*, *ištarniya*, then, we may reasonably look for the corresponding cases of a noun denoting another part of the body. The fact that the Sumerian and Accadian equivalents of our postposition (both often standing for it in Hittite texts) are *ŠĀG* and *LIBBI* suggests that the noun we want meant 'heart'; but the Hittite word for 'heart'—or one of them—is known; its gen. is *kardiaš* and its dat.-loc. is *kardi*. Other parts of the body, however, give rise to the same figurative expressions as the heart. In Latin *cor* 'heart' and *pectus* 'breast' are interchangeable in their figurative uses. In Greek also *στέρον* 'breast' is often regarded as the seat of the emotions. I suggest, therefore, an etymological connection of Hittite *ištarna* with Greek *στέρον* 'breast'. The Gk. word, of course, is never a preposition, and ordinarily it is not weakened so far as to mean merely 'the interior'. That the latter development is quite possible, however, is shown by Nicander, *Ther.* 924: ὑπὸ στέροισι καμίνου, 'in the heart of the fire'. Hrozný (*SH* 96²) was right in connecting *ištarna* with the root of Lat. *sterno*, but he overlooked the derivative of that root which really justifies the etymology.

Hittite *ištark-*, *ištarkiya*-²⁷ is commonly impersonal governing the accusative, e.g. *ištarakzi-war-an* 'he is ill'. There is also a causative with nasal infix. *ištarnik-* 'cause harm to'. These verbs may be connected with Gk. *στραγγάλη* 'cord', *στραγγαλοῦν* 'strangle', Lat. *stringo* 'draw together, tie up', OHG *stricchan* 'tie up', etc. The original meaning seems to have been 'tie, bind' or the like. The Hittite meaning 'it harms, goes ill, makes ill' may have come from this in any one of several ways. It is enough for our present purpose to point out a somewhat similar development in Latin, which may or may not be old. Livy (22.51.6) says that the morning after Cannae many thousands of dead

²⁵ See Friedrich *ZA* NF 1. 140-4 (1924); Sommer and Ehelolf *BoSt.* 10. 42-3.

²⁶ *American Journal of Philology* 48. 249-51 (1927).

²⁷ See Götze, *Hatt.* 72.

and wounded lay on the field. *Adsurgentes quidam ex strage media cruenti, quos stricta matutino frigore excitaverant vulnera, ab hoste oppressi sunt*, 'some blood-stained wretches who struggled to their feet from among the slain, because their wounds, smarting with the morning chill, had compelled them to move, were cut down by the enemy'. With this compare Ovid, *Trist.* 5. 6. 19-21: *spiritus hic . . . membris exeat ante meis quam tua delicto stringantur pectora nostro*, 'may this breath leave my body before your breast is pained by fault of mine'.

Of course the vowel *i* was sometimes phonetic when written before or between *šp* or *št* at the beginning of a word. A clear case is *šiptamiya* (Papanikri 4. 35), the dat.-loc. of **šiptamaš*, 'seventh',²⁸ where, as often, *i* is written for *e*. I cannot cite sure instances of phonetic *šit*-, *išp*-, or *išt*-.

²⁸ This meaning was suggested by Hrozný, *Die Sprache der Hethiter* 96, on the basis solely of phonetic resemblance to Lat. *septimus*, etc. Kellogg, *Hittite Numerals* 60 ff., tries to prove its correctness by an analysis of the text.

SUFFIXES, DETERMINATIVES, AND WORDS

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In the recently published third volume of his *Indogermanische Grammatik* Professor H. Hirt, in his strikingly original and suggestive way, has unfolded a panorama of the history of the formation of IE nouns which differs so radically from the conception of the majority of scholars both in many details and in his general point of view, that it will be of the utmost importance to examine the credibility of his theories and the reliability of his methods. This is true all the more because his presentation, as elsewhere, through its clarity, through the interest which it arouses, and through the confidence with which it is presented, is apt to fascinate the minds of those who have not yet formed an opinion of their own, but are seeking orientation in the problems of IE linguistics for the first time.

The outstanding peculiarity of Hirt's opinion is this, that while he believes in adaptation as far as inflectional endings are concerned, and insists on the identity of these with the word-forming suffixes, yet the latter themselves are explained altogether in the manner of Bopp and his followers. It is true that he admits that new suffixes arise by misdividing words, so that the suffix is increased at the expense of the primitive word, and that he devotes a whole chapter to this process, but to him this simply means taking a formative part of the word and adding to a suffix which already was there (226), as in the example of Gr. $\varphi\upsilon\sigma\iota\kappa\acute{o}\varsigma$ by misdivision as $\varphi\upsilon\sigma\iota\kappa\acute{o}\varsigma$ giving rise to the suffix $-\iota\kappa\acute{o}\varsigma$. He ignores the possibility that parts of roots and unanalyzed words may become suffixes through word contamination and subsequent associations of old and new forms, e.g. that IE $*\acute{g}him-os$ ¹ Skt. *him-ds* 'cold' brought its

¹ To the speaker of the language $*\acute{g}him-o-s$ was the correct analysis, i.e. he did not think of the m as being a suffix because there was no associated word without m with which to compare. For the probable earlier history of the word cf. Brugmann, *Gr.* 2. 1². 135. Of course it is equally true that words which were very clearly derivatives to the most superficial analysis would also often or usually be felt as a unity. These considerations show how illogical it is to accept 'mis-

m to the opposite **gh^hor-mo-s* Skt. *ghar-má-s* 'hot', and that the suffix *-mo-* then revealed itself by association with related words without *m*, corresponding e.g. to Gr. *θέπος* Skt. *hāras*.

The suffixal system as such, therefore, Hirt derives by composition. However, the most original aspect to his theory of word formation is his division of suffixes into two classes. When the formative is meaningless he speaks of 'determinatives', the name coming from the common root determinatives of IE grammar, which are identified with them, and the origin of which he seeks in numerous suffixed particles corresponding to those added to pronouns, as **sme* or **me* in **ns-(s)me* Gr. *ἄμμε*. All those suffixes which display a tangible meaning he seems to derive from independent words, so that he herein presents the same point of view as the late Professor Fay, whom, however, he does not mention even where the obvious similarity of opinions seems to indicate indebtedness.

Since Hirt denies any other ultimate source of suffixes than particles and independent words (85), we may conclude that the two chapters on determinatives (V) and suffixes from independent words (VII) are meant to give an adequate general picture of the way in which IE suffixes arose, even though he naturally admits the uncertainty of many an example and will not offer a definite explanation for others. Before examining therefore his methods as pertaining to particular instances, it will be well to apply to his entire exposition certain general considerations and principles, so as to give one an idea whether his picture is true or false in essence.

To the general point of view that there is no ultimate source of suffixes other than composition, be it with particles or 'independent' words, it can merely be answered that Hirt has made an incomplete disjunction. Not only is at least one other such source conceivable, but he has, in the opinion of the writer, omitted from consideration the most important one of all, sc. word-contamination, irradiation, congeneric assimilation, and influence of otherwise associated words, which processes can cause not only redividing between words and suffixes already there, but can create a new suffix altogether. Cf. *Am. J. of Phil.* 37. 176 ff., 255 ff. Whether Hirt has never heard of these additional possibilities, or

division' as a process which rearranges the length of the various formative elements, but to reject the same occurrence when it clips off something from the supposedly sacred and inviolable root. To the mind of the speaker it did not make a particle of difference whether the part clipped came from a root or another formative, since he did not and could not know what the original form of the root might have been, and the whole process was unintentional anyway.

whether he has purposely refrained from mentioning them, does not affect the fact that he has based far-reaching conclusions on a disjunction that lacks a most important alternative.

Not only this, but there is a definite reason why Hirt's sketch of the history of IE word formation must be essentially false, i.e. false for the large majority of words. It totally neglects to draw the necessary conclusion from the psychological fact that in ordinary speaking we are rarely conscious of the analysis of words into distinct elements,² and that the vast majority of mistakes (which are the source of linguistic change) are not due to consciously (though wrongly) dividing words into their elements at all, but rather to associations of which we are either unconscious or dimly conscious. Cf. the books of R. Meringer, *Versprechen und Verlesen* and *Aus dem Leben der Sprache*. We have every right to assume that these same influences which cause new word formations in the offhand speech of today are those which caused new words to be formed in the past. Surely it would be wrong to deny both that we ever analyze to any extent our spoken words as well as that suffixes ever arose by composition, but ordinarily we certainly do not while speaking analyze our words, and the analogy of the mental processes involved in momentary mistakes forces us to conclude that most of the linguistic changes, including the formation of words, must have been unintentional processes, and this can mean only that most suffixes at all times were formed by word contamination which was unknown to the speaker on its first occurrence.

On the other hand, not only the assumption that all words were formed by the conscious process of composition, with the exception of a small number of root words, but also the amount of analysis often presupposed for the individual word, is manifestly impossible. Thus Gr. *ὁμαλός* Lat. *similis* is supposed to have been formed by adding the determinative *l* (139), followed by the independent word *o* (187) to the stem of *ὁμός* which, since it has the thematic vowel, must itself be a compound of **som-* and the word *o*, followed by the determinative *-s*. To analyses of this kind there is absolutely no limit whatever. How far e.g. Hirt would go in the case of Gr. *νεφέλη* Lat. *nebula* 'cloud', no one could profess to know. But we can apply his method and get the following result: The root or better primitive word **ne* is followed either by the determinative *bh* (133) or the independent word *bh* < **bhū* or **bhā* (224); next comes the independent word *e* or *o* (184 ff.) followed by the determinative *l* and the determinative *ā* (108). Result: **ne-bh-*

² Cf. Wundt, *Sprachpsychologie*³ 1. 584 ff.

e-l-ā, consciously analyzed, at least when formed, into five elements, although not one of these has a tangible meaning.

Still worse than the case of composition in general is that of composition with particles, which Hirt calls determinatives, that are to explain the meaningless suffixes. The indisputable fact that pronouns are so generally compounded with particles, and that these have yielded many pronominal case-endings, cannot be used to support the contention that nouns had the same habit in earlier periods. There is a special reason for the emphatic and contrasting particles of the pronouns which does not hold good for nouns. The ever present contrast between *I* and *thou*, *we* and *you*, *he* and *she*, *this* and *that*, and many others, is a continuous inducement to employ all the emphasizing elements which language possesses. But this motive is present only occasionally for adding emphasizing particles to substantives and adjectives, nor is there any evidence in historical periods that particles were added to nouns in large numbers. Hirt's own explanation of the reason for employing them is that they had already become a sort of suffixed article in IE times (164 f.), comparable to the various articles in certain Bulgarian dialects. But we are squarely up against a destructive dilemma. If these particles really had developed into articles, they would have been inflected, but there is no evidence that any such IE articles developed from particles, or that there was any IE article at all, even one developed from pronouns, like those which individual IE languages know. Even the use in this function of the pronominal stem **to-* in Greek and Germanic can be shown to have been an innovation of these languages. Cf. Brugmann-Thumb, *Gr. Gr.*⁴ 485 f. If, on the other hand, we assume that these particles were added as such, and had not developed into articles, this assumption of the addition of an immense number of particles to nouns conflicts with the rareness of such an addition in historical times and the absence of any frequent motive for such an addition.

When therefore Hirt himself is astonished that he has found so many particles suffixed to nouns, we might add that he is so no more than we—until we looked into his method of finding them. These 'determinatives' are for the most part either single sounds (*i, u, ē, ō, ā, ī, k, g, t, d, dh, th, p, bh, r, l, n, m, s*) or else a combination of only two sounds (e.g. *ye yo, ghe gho*). They thus comprise a large part of the sound material out of which the language is made, including the simple vowels except *ū*, and *o e*, which is claimed as an independent word, and most of the common consonants. There are not many words which do not contain

at least one of these sounds, and we may pertinently ask what criterion Hirt has to distinguish between determinative and other uses of these same sounds. Certainly not the meaning, since they are declared to be meaningless, or at least are supposed to explain meaningless suffixes. Nor can we appeal to their position, for it is an arbitrary assumption that a meaningless element placed at the end of a word just before the inflectional endings ever had any more of a separate existence than the same sounds in the beginning or middle of the words. This unwarranted assumption is made still worse by the fact that these determinatives, being particles, must have been uninflected originally, and that the process by which e.g. German *dieser diese*, opposed to Engl. *this these*, has shifted the inflection from middle to end, in that case was not an occasional occurrence, but took place in at least half of all substantives, or at least in half of those which existed when the process took place. Once more that which took place occasionally in historical times is supposed to have been the normal thing in a formative period. Once more Schleicher's point of view is adopted against that of the 'Junggrammatiker', who maintain that the linguistic processes of the present and the past are identical.

We may discard absolutely and unconditionally the whole theory of 'determinatives'.³ It has almost everything against it, and almost nothing for it. It is unnecessary to go into details and to show what inconsistencies and absurdities it leads to when applied to individual words, since the total absence of criteria lets it depend on the whim⁴ of

³ The assumption that determinatives, i.e. particles, were promiscuously added to nouns is also a blemish on Hirt's otherwise admirable suggestions on the origin of nominal inflections (VI). That inflectional endings, as far as not adapted, may have originated as pronouns or prepositions, we may well believe. That there were any particles among them, except when a pronominal ending was transferred to nouns secondarily, is highly improbable. That there were as many as Hirt assumes, is outside of the realms of possibility. The difference between the endings of nouns and pronouns resolves itself just exactly into this: All distinctively pronominal endings, of the origin of which there is any clue, are particles, while of the nominal case endings just the reverse is true. In the light of the above paragraph that is what we are bound to expect.

⁴ A peculiarly whimsical example of Hirt's, bearing on inflection rather than word formation, is his assumption that e.g. **iug-om* nom. acc. neut. is the correct analysis rather than **iugo-m*. From the fact that only the neuters of the *o* declension have the *m*, and that therefore no *-m* occurs alongside of *-om* in other neuters, Hirt draws the astonishing conclusion (88) that the *-om* of the neuter was not subject to the workings of the accent, and must therefore be a late addition, particle of course. He is sure it must be separated from the accusative masc. fem.

the individual's analysis whether he claims something as a 'determinative', or a 'real' suffix derived by composition, or a part of an unanalyzable stem. Two or three examples may suffice. Although *o/e* is the most meaningless of all suffixes, it is declared to be an independent word (185 ff.) because it often forms adjectives, while *ā*, which, although it is used parallel to *o* in almost every way, yet has a tangible meaning oftener than the latter because of its greater importance in the formation of abstract nouns and because it also forms feminine derivatives from masculines, is placed among determinatives (108), although in terms that would better fit its classification with the real suffixes. In case of Gr. *φειδωλή*, the abstract of *φείδομαι* 'spare', the *l* is declared a determinative (139) which does not have any influence on meaning⁵, but the suffix *-men-*, which forms similar abstracts e.g. in Gr. *νέυμα* Lat. *nūmen* 'nod': *νέω νυο*, has such an important meaning that it probably must be an independent word (202). Or in case of the suffix *-tāl(i)-*, in spite of the parallelism of the series of equivalent suffixes *-t-*, *-tā-*, *-tāt-*, *-tāti-*, which suggests gradual accretion by 'misdivision', the function of forming adjectival abstracts is declared so important that it must needs be an independent word. The suffix *-mo-* is surmised to have been *mē* 'measure' in Lat. *minimus*, analyzed *minu-mo-s* 'having a small measure', while e.g. Goth. *dōms* 'judgment' is said to have the determinative *m*, although it is just as easy to force it into the category of *mē* 'measure' as being 'the measure of what is being done' (cf. Gr. *τίθημι*). No further comments are necessary. This is enough to show that even if the whole doctrine of determinatives were not fundamentally wrong, no reliance could be placed on judgments of individual instances.

Let us now turn our attention to the chapter on suffixes, in which those examples are cited which Hirt surmises or believes to have been inde-

in *-o-m*, as well as from all the *o* cases of the neuters themselves (all except nom. acc. pl.), but that it does belong to the ending of pronouns as Skt. *ah-ām* 'ego,' and of adverbs like Gr. *ἐμβαδόν*.

⁵ It is true that alongside of *φειδωλή* we find *φειδῶ* in the same sense, but it would be rash to maintain that when one abstract suffix is added to another the later one is meaningless. Surely one diminutive suffix preceded by another is not called meaningless, but is considered to have been added for emphasis. Cf. Brugmann, op. cit. 674. To the apperception of the Greek speaker *-ωλη* apparently was felt as a single suffix, as is shown by the analogical *εὐχ-ωλή*: *εὐχομαι* and *τερπ-ωλή*: *τέρπω*, for which Hirt assumes abstracts **εὐχώ* and **τερπώ* as primitives. That in this combination the *λ* had any less to do with the sense than the *ω*, there is nothing to prove.

pendent words. Here he does not stand alone, but is doing what others have done before, e.g. Prellwitz in Germany and Fay in America. A large part of the objections to his procedure will therefore be the same as those applying to the others. The writer has stated these at greater length in his article in the *Am. J. of Phil.* 37. 173 ff., and can repeat them briefly here only to show that Hirt is falling into the same pitfalls as the others, and is making the same mistakes, in spite of the fact that the class of determinatives has been invented to receive the discards from the other category.

When the word from which the suffix is ostensibly derived is a general, vague, or abstract word, as 'standing', 'appearing', 'being', there is indeed a large proportion of derivatives which can be forced into the mould, but they are all unconvincing because logically the meaning of any word ending in any other suffix could be analyzed in exactly the same way, because there is nothing about any particular word which points to such an origin, and because the whole idea presupposes that in an early state of language abstract words were so incessantly in use that they were regularly added to complete words without changing their meaning, and so that it was preferable to say e.g. 'what has become a deer' to simply 'deer' (ἐλαφος 'deer' supposedly related to *bhū 'become'). Similar examples from Hirt are the derivation of *-istho-* from *sthā-⁶ 'stand', so that e.g. ἡδίστος 'sweetest' must have been 'standing as sweet', and that of the suffix *-es- -os-* from *es- 'to be' (19', though doubtfully), so that Skt. *grāvas* Gr. κλέος must have been the 'being of fame' instead of 'fame'.

When the supposed source of the suffix is a concrete word, or a word of small extension of use, there are other elements of improbability. It is then necessary to assume that one or very few of the derivatives still show a mere trace of the original meaning, and that the rest have wandered so far astray that no connection could be discovered even by the penetrative intelligence of the inventors of such etymologies. It would be necessary to believe that in hundreds of examples the suffix *-iō-* shows no trace of its origin from *i* 'to go', but only a mere handful like Gr. ἄγριος 'wild' Skt. *ajryās*⁷ 'belonging to the plain' still proves it

⁶ So Fay, *Am. J. of Phil.* 34. 15.

⁷ It is a specious argument used by Hirt and others that part of the examples of a suffix in such cases must have had a different origin from the rest, and that it is not permissible to want to bring everything under one category. As a general principle this certainly cannot meet with any objection: it is its application that is not convincing. If ἄγριος could be interpreted in no other way, or if the origin

to have originated thus nevertheless (194), because one can force the meaning 'going in the field' upon these words in a limited number of occurrences. We are asked to accept the derivation of *-tāt-* and *-tūt-* from the basis **teḡā* 'be strong' because, as opposed to hundreds of others, one can force Gr. *νεότης* 'youth' to mean 'fulness or strength of youth' even though the identical Lat. *novitās* vigorously protests because it did not mean 'youth', at all, but 'newness', and although the Greek primitive adjective *νέος* shows 'new' rather than 'young' to have been the original meaning of IE **neḡo-s*. Or *-mo-*, used in a large variety of uses (*Am. J. of Phil.* 37. 181 f.), is supposed to have shown its original meaning only in a handful of words like the above mentioned *minimus* and *brūma* < **brevimā* 'having a short measure'. At other times, as when *-ḡent-* is derived from *ḡen* 'win', not even a single possible pattern is at hand (200), so that we do not even find the slightest attempt at proof. That a mere picking out of a word which looks superficially like a certain suffix, even with the aid of a few supposed patterns, is far from being even a presumption in favor of such an origin, is shown by various considerations. Every suffix must look like some word or other, since there are only a limited number of sounds and syllables, of which all occur in some word or other. Often, moreover, a suffix looks like several different words, and one can then usually make out as good a case for one as the other. Thus Fay, *CP* 6. 315 ff., saw the root **ed-* 'eat' in the Latin suffix *-ēdon-*, e.g. *ūrēdo* 'blast', 'blight' was 'eating to burn', *dulcēdo* 'sweetness' was 'sweet taste'. The writer remarked (loc. cit. 175) that the suffix with as good a right could be referred to **dō-* 'give', and that e.g. *rubēdo* 'redness' might just as well have been 'the giving of redness', and *frigēdo* 'cold' was just as convincing as 'the giving of cold'. He also remarked that by the same process one might spot Lat. *ventus* 'wind' in the IE suffix *-ḡent-*, e.g. Gr. *ἀνεμο-φεῦτ-* 'having wind blasts'. It is no more fantastic than Hirt's derivation of the same suffix from *ḡen* 'win', and has at least this advantage that a pattern could be found. Finally, the assumption that a few words showed the original concrete meaning of a suffix, and that this became attenuated in course of time, is in conflict with the history

from *i* 'go' were self-evident and did not bear the stamp of artificiality, we could readily subscribe to its etymology. But *ἀγριος* is much more convincingly taken as 'belonging to the field', and thus is exactly like the great number of denominative *i(ḡ)o* adjectives. Where both form and meaning coincide with the normal, it puts an exceedingly onerous burden of proof on him who would separate in origin.

of suffixes where it can be controlled; for all words like diminutives, which show concrete meanings of suffixes, are found side by side with others in which the same suffix has no meaning or an extremely attenuated meaning, and it can in every instance be shown how the former developed from the latter. To say that these must be separated as having a different origin, could be correct only if this was not the regular occurrence but only an isolated phenomenon. Furthermore, suffixes which are demonstrably derived from words, e.g. German *-heit*, *-tum*, begin with a narrow meaning and branch out gradually, as all suffixes must have done if they were derived from words.

Two further considerations detract from the impressiveness of Hirt's long list of suffixes from words. Though it is a point in his favor and not against him, that he is very doubtful about a number of his own suggestions, yet this does lessen the persuasiveness of the whole chapter, if its object is to show that all suffixes with meanings were originally words. This applies as well to those for which he has suggested patterns which do not convince himself, as to others for which he cannot even find possible patterns. Altogether valueless is his classification in this chapter of certain suffixes, e.g. *-ent-* (190 f.) and *-uos-* (200), as possibly coming from words because they look like words to himself, presumably because they are longer than the determinatives, although he has been unable even to suggest a word that is superficially similar.

In the chapter is included one other class of words which could give a mistaken impression of the frequency of suffixes derived from words, namely those which form a small circle with word ends of narrow meaning which can with certainty be traced to independent words. These mostly would not be regarded as suffixes at all, but as final members of compounds. Not many would think of the *-os* of Gr. *αἰθρος* 'gleaming' or *οἶνος* 'wine-colored' as a suffix, since the resemblance of this syllable both in form and meaning to the verbal root *ὀτρ-* undoubtedly kept the association between them intact. The only reason that Lat. *atrōx* and *ferōx*, if their final member is identical, are no longer felt as compounds, is the loss of the independent word, so that there was no longer anything with which to associate. However, it is to be observed that these Latin words did not cause the suffix to be added to other words promiscuously. Even in spite of its being an obscure final member, it was not yet a true suffix. Nor could we justly speak of a suffix *-gena* in Lat. *indī-gena* 'born within, native', nor would the last member of e.g. Skt. *prathama-jā-s* 'first born', or of Gr. *νεο-γνός* 'newly born' be rightly considered as suffixes in spite of Hirt's classification (206), for the asso-

ciation with the verbs from which they came would be patent to every one. Only in a few examples like Lat. *beni-gnu-s* 'kind', 'of kind nature', would the final member begin to be felt as a suffix through loss of connection with the verb. Still another example is the Lat. *sim-plu-s* 'simple' (223 f.) and the identical Gr. ἀ-πλό-ς and the like, which are still so close to the original meaning 'one-fold' etc. (basis **pel* 'fold') that they no doubt were felt as such even after association with a definite verb root became impossible. On the other hand there are a few probable or possible instances mentioned where we can with more justice speak of a suffix having developed from a word. Such are the -*ssō-* of Gr. περι-σσό-ς < *περι-κίω-ς, of which the last member may be reasonably identified with the root of κείμεν 'lie', so that it was originally 'lying around', and the -*teno-* in Lat. *diū-tinus*, perhaps related to Skt. *tan* 'stretch' as 'stretching out, i.e. lasting a long time'. It is to be observed, however, that such plausible examples are always those of small productivity, and that not one of the really frequent suffixes can be satisfactorily related to any word.

This is indeed a very small residue from the large number of words found in the chapter discussed, and we have no reason to be surprised with Hirt himself (225) at the number of suffixes derived from words. The reasonable examples are very few indeed, a mere handful from a large granary. Moreover, before arriving at a final estimate of the validity of Hirt's doctrines, it must not be forgotten that his chapters on word formation are not a comprehensive survey of the material comparable to that of Brugmann in his *Grundriss*, but he has selected merely those suffixes which seemed to hold out some promise of supporting his point of view, and again his presentation of each suffix does not survey its extant uses and meanings, but only those which are supposed to corroborate his theory of determinatives and suffixes arising by composition. If we think of the many suffixes and uses of suffixes which were not mentioned because they do not fit into Hirt's scheme, in addition to those which were mentioned, but the explanation of which is not persuasive, we will rather be astonished at the small amount of convincing material found in the chapter on suffixes and the complete absence of persuasiveness in the chapter on determinatives.

This failure to carry conviction is largely due to not subjecting the exuberant and suggestive flood of thoughts which come to the author's mind to the rigid censorship of self-criticism and psychological analysis. He has mistaken for a real proof the benevolence which every person feels for his own thoughts, and resolutely shuts out from the circle of

his experience everything which conflicts—linguistic material, contrary opinions, general principles. The exposition of the history of IE noun-formation remains a description of how the system possibly cannot have originated as a whole, and offers only a few individual explanations that give promise of being true. The present writer, after reading the chapters here discussed, is more convinced than before that composition cannot have been the main source of the IE system of suffixes, but that these, like the root-determinatives,⁸ are due principally to irradiation, word contamination, mutual influence of associated words.

⁸ The theory of Bloomfield, *Am. J. of Phil.* 4. 66 ff., that root determinatives arose by word contamination, is infinitely more capable of explaining these elusive elements in their large majority, than their identification by Hirt with 'determinatives' or particles which he has found in noun formation. The objection raised by Persson, *Beiträge* 523 ff., that the identity of suffixes and root-determinatives disproved Bloomfield's theory, is met by the answer that suffixes arose in the same way—an idea which to Persson seemed inconceivable.

THE LANGUAGE OF THE *CUENTOS POPULARES ESPANOLES*¹

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6. arrullar

This verb appears in a single folk-tale from Cuenca, New Castile, in three examples: 239 ('— ¡Ay, yo tan bonita y venir a por agua! ¡Arrula, arrula, cantarillo! Y lo echó a arrular y se rompió en mil pedazos.')

The meaning is evidently *rodar*, 'to roll', and it is derived from *rular* given in *Acad.* 15 and other Spanish dictionaries with the meaning *rodar* with prosthesis of *a*, a well-known phenomenon in Spanish especially with verbs beginning with *r*.² *Acad.* 15 also gives the form *rolar*, the same as the Portuguese form, as equivalent of *rodar*, *rular*. Outside of the three examples above given for *arrular* I have no examples of either *arrular*, *rular*, or *rolar*, from either learned or popular sources. The *Diccionario de Autoridades*³ gives only *rular* and characterizes it as a vulgarism: 'Es voz del estilo baxo.' Spanish and Portuguese *rolar*, French *rouler*, Provençal *rotlar* and Italian *rotolare* are derived from Latin *rotulare* (Meyer-Lübke, *REW* 7396), but Spanish *rular* and *arrular* cannot be so derived. There is also an Italian *rullare* which according to *REW* may be derived from the French *rouler*, and it may be that the Spanish *rular* is likewise of French origin. Its presence in a dialectic form *arrular*, however, is extraordinary in view of its apparently very limited use in popular speech, where *rodar* takes its place regularly.

7. asín, asina, ansina

Each one of the above forms represents the old and modern literary form *así*, in Old Spanish usually *assí*. The literary *así* is itself quite frequent in the *Cuentos*, often pronounced without stress and with the *i*

¹ Continued from 3.198.

² *Studies in New-Mexican Spanish* I, §188 and Cuervo, *Apuntaciones* §§903-6.

³ *Diccionario de la lengua castellana* published by the Real Academia Española in six volumes, Madrid, 1726-9.

consonantal, like English *y*, when before a vowel with which it forms a syllable in the same phonic group.

The dialectism *asín* seems to be rather widespread in central and southern Spain: Toledo 72 ('y *asín* lo tira río abajo.'), 104 ('Y *asín* iban hablando.'), 281, 295, 358, 360; Sevilla 265 ('... le dijo que sí, que *asín* lo jaría.'), 423; Córdoba 95, 165, 341, 342; etc. The examples of *asina* are all from southern Spain: Ciudad Real 259 ('Seguiremos *asina* . . .'); Granada 241, 243, 330, 332; etc. In the Asturian folktales we find examples of *ansina*: 74 ('Y *ansina* lo hicieron.'), 76 ('*Ansina* charon bonos dies . . .'), 78.

The above dialectic forms and others derived from them have a wider geographical distribution than one might deduce from the evidence of the Cuentos. *Asín* and *asina* are commonly used in La Montaña, Salamanca and Aragón.⁴ *Anst* is commonly used in Galicia,⁵ a form *anstn* in Salamanca, and both *asina* and *ansina* are commonly used in Asturias, and Salamanca.⁶ In American Spanish *anst* and *ansina* are used in Argentina, Mexico and New Mexico,⁷ *astn* and *asina* in Porto Rico, and *asina*, which is by far the most common form in all regions, in Chile, Costa Rica, Mexico, New Mexico, Columbia and Porto Rico. *Anst* is also found in Jewish Spanish.⁸

Every one of the dialectic forms above given has been used in literary Spanish with the single exception of the form *anstn*. Examples from literature may be found in Cuervo, *Diccionario*, s. v. *ast*.⁹ In Old Spanish the oldest documents of the tenth and eleventh centuries have as equivalents of the modern adverb *ast* only the form *si* < *sic* and the unusual *sive*, but for the twelfth and thirteenth centuries the common forms are *ast*, *asín* and *así*, *assín*, as well as the primitive *si*. In the *Cid* and other Old Spanish texts *si* is frequently used as a synonym of

⁴ García-Lomas, *op. cit.*, s.vv., Lamano y Beneite, *op. cit.* §60 and s.vv., and Jerónimo Borao, *Diccionario de voces aragonesas* 168, Zaragoza, 1908.

⁵ Cuveiro Piñol, *op. cit.*, s.v.

⁶ A. de Rato y Hevia, *Vocabulario de las palabras y frases bables* 12, Madrid, 1891; Munthe, *op. cit.* 58, and Lamano y Beneite, s.v.

⁷ Martín Fierro, ed. Tiscornia, *op. cit.* 375-6; Ramos y Duarte, *op. cit.* s.vv., and *Studies in New-Mexican Spanish* I §34.

⁸ Marxuach, *op. cit.* 62, Manuel Antonio Román, *Diccionario de chilenismos*, Santiago de Chile, 1908-1914, s.v., Carlos Gagini, *Diccionario de costarriqueñismos*, Costa Rica, 1918, s.v., Ramos y Duarte, s.v., *Studies in New-Mexican Spanish*, above cited, Cuervo, *Apuntaciones* §710, and Max Leopold Wagner, *Beiträge zur Kenntniss des Judenspanischen von Konstantinopel*, Wien, 1914, s.v.

⁹ Additional examples especially for the Classic period are given in my *Studies in New-Mexican Spanish* I §34 and notes.

assí.¹⁰ In Old Spanish the most common form is *assí*, although *asín*, *assin* (the forms preferred by Berceo), and *así* are also commonly used. In the fourteenth century a new form appears, *ansí*, and throughout the fourteenth and fifteenth centuries *así*, *assí*, *ansí*, *asín*, *ansín*, *asina*, *ansina* are used. In the fifteenth century *ansí* is the most common form and it is still preferred by Santa Teresa and the dramatists of the sixteenth century, although Juan de Valdés in his famous *Diálogo de la lengua* (early sixteenth century) preferred *así*. By the beginning of the seventeenth century, however, the literary forms are *así* and *assí*; but Lope de Vega, Tirso de Molina, and the other dramatists of the Golden Age use also *ansí*, *asina*, and *ansina* frequently as common examples of popular speech. In his famous *Tesoro de la lengua castellana*, 1611, Covarrubias gives only the form *assí*. There is found also a form *ansinas*.¹¹

The attempt to characterize any of the above forms as peculiar to any distinct province or region of Spain is fraught with great danger. The traditional habit of ascribing dialectic Spanish forms to Andalucía, for example, is very old. Gonzalo de Correas in his *Arte Grande de la lengua Castellana* (1626), p. 222, considers *ansina* as an Andalusian form. How can a form be Andalusian in origin when it is one regularly used in classic Spanish by writers from non-Andalusian regions and commonly used even today in Asturias and Salamanca? And again how could we characterize as Andalusian the forms *asín* and *asina* so commonly used in our *Cuentos* from central and southern Spain when both are regular forms used in modern Aragonese, when *asina* is a regular form in modern Asturian and Galician and when the form most commonly used in the *Cuentos* from Andalucía, *asín*, is one of the forms preferred by a Castilian writer of the thirteenth century, Gonzalo de Berceo? Cf. Milagros 87b, 329c, 363b.

The phonology of the problem is quite complicated. The original Latin *sic* was preserved in Spanish, French, and other Romance languages as *si* in the early period of the languages, but very early there appear the synonyms with the prosthetic syllables, Spanish *así*, *asín*, *assí*,

¹⁰ Menéndez Pidal, *Orígenes del Español* §77, and *Cantar de Mio Cid* II §§175, 180, and III, s.v. *assí*.

¹¹ The form must be very rare since Cuervo does not give a single example in his *Diccionario*. The only example I have is the following one from the sixteenth century *Viaje a Turquía* of Cristóbal de Villalón (ed. Antonio G. Solalinde, Madrid 1919, I 189): 'El fuése tras el interese, y dijo que, estando él con el marqués del Gasto, había curado dos casos *ansinas* y ninguno había peligrado; no sabía por qué aquellos señores contradecían tanto.'

asstn, *anst*, etc., French *ainsi*, *einsi*, *enssi*, *ainsin*, *issi* (in the *Chanson de Roland*), *ainsin*, Provençal *aissi*, *aisi*, *acsi*, *assi*, *eisi*, Portuguese *assi*, *assim*, Italian *costi*. The intrusive *n* appears in both the Spanish and French forms and the final nasal in other Romance languages as well. For French *ainsi* Diez proposes Latin *aeque sic* and Littré proposes *in sic*.¹² Meyer-Lübke in *REW* 7892 explains the Spanish and Portuguese forms by saying 'mit dem *a* der Demonstrativa', which explains nothing. In view of the fact that in the Spanish of the tenth and eleventh centuries we have only *si* and never *así*, etc. it may be that the forms with the prosthetic *a* in Spanish are after all late formations of the twelfth century (Cf. *Reyes Magos*, *así* only, 42, 73, 86.) and formed on the analogy of the numerous adverbs and prepositions developed from Latin sources with *ad* + noun, adjective, etc., such as *abes* < *ad vix*, *ayer* < *ad heri*, *aún* < *ad huc* (cf. Aragonese *adú*), *adiesso* < *ad id ipsum*, *assaz* < *ad satis*, etc. The problem of the prosthetic *a*, however, is closely connected with the development of the medial *n* and possibly with the problem of the final nasal.

Menéndez Pidal in *Cantar de mío Cid* II, s.v. *assi* proposes Latin *ad sic* as a source. Phonetically there are no objections to this etymology. The first assimilation would be *assi* just as *ad satis* gives *assaz* and then by an early simplification *assí* > *así*. The only objection lies in the well-known fact that *así* is really as old if not older than *assi* (cf. *Reyes Magos* above cited). If we assume that intervocalic *c* + *s* (*x*) could in Spanish result in an early assimilation to *ss* instead of the usual vocalization of the *c* and subsequent assimilation to *š* > modern *j* we might properly consider *ac sic* so frequently used in the *Peregrinatio* as the source. The adverbial development is quite clear in such cases as: '*Ac sic ergo exeuntes de Hero peruenimus ad ciuitatem, que appellatur Arabia; quae est ciuitas in terra Iesse.*' 39,2. This double development actually occurs in other Spanish words.¹³ This common *ac sic* of the *Peregrinatio* which is actually preserved in the Provençal *acsi* would give in Spanish, then, by assimilation *assi* and then *así*. We have again as in the case of *assí* from *ad sic* the objection that in the literary

¹² Hatzfeld-Darmesteter-Thomas, *Dictionnaire général*, s.v. *ainsi*.

¹³ *Exire* gave *essir*, *dixit* gave *disso*, etc. Cf. Berceo, *Milagros* 69: '*Disso unas palavras de mui grand liviandat.*' and 289: '*Essiste de tu casa por venir a la mia.*' For other cases see Hanssen, *Gramática histórica de la lengua castellana*, Halle, 1913, §132. In Latin the assimilation of medial *x* to *ss* took place in some regions in the first century (Grandgent, *Vulgar Latin* §255) and in Italian this assimilation is quite general.

documents available *así* is as old if not older than *assí*. Perhaps we can disregard this objection on the grounds that we are dealing with synonyms of independent origin, *así* being a late twelfth century analogical formation as explained above, *si* < *sic* with the analogical prosthetic *a*, and *assí* developed from *ac sic* at the same time. To settle this point one would have to have very complete statistics concerning *así* and *assí* in the twelfth century and in the beginning of the thirteenth. Berceo uses both *asín* and *assín*. In the *Cid* there are 64 cases of *assí* to 9 of *así*, and if this represents the actual linguistic condition of Castilian in the middle of the twelfth century it favors the theory that *assí* is older than *así* and therefore the etymologies *ac sic* or *ad sic* > *assí* and then later *así*, etc. But in any case the *ac sic* of the *Peregrinatio* and the Provençal *acsi* favor the source *ac sic* for *assí*.

The development of the nasal elements is even more complicated. Among the oldest Spanish forms of the early thirteenth century there are two with a final *n*, the forms *assín*, *asín* used by Berceo, cf. Portuguese *assim*. In Spanish there is also a dialectic *sin* or *sēi* from *sic*, meaning 'yes'.¹⁴ If we assume that Spanish *así* is developed from *si* after the analogies above discussed and that it is actually older than *assí*, the presence of the final inorganic *n* is not easy to explain for Spanish *asín*, Portuguese *assim* and the plain *sin* < *sic*. Perhaps we must look for vague analogies. The presence of inorganic final *n* in Spanish is found in other words, but it is always easy to explain. Dialectic *nadien* (common in the *Cuentos*) is formed on the analogy of *alguien*. The affirmative *sin* (= *sí*, 'yes') is developed probably from *sí* by analogy to Old Spanish *no* and *non* that were used side by side for a long time. Just why the analogy would be extended to *asín* is not clear. Could Old Spanish *asín* and other early Romance forms that have final *n* or *m* be explained as developments due to confusion in Vulgar Latin of *ac sic* and *exin*? In passages such as the following from the fifth century Spanish chronicle *Idatij Episcopi Chronicon* the meaning itself of *exin* < *exinde* is not entirely different from *ac sic* (= 'thus,' 'and so,' 'in this way'): 'Vitus Magister utriusque militiae factus ad Hispanias missus, non exiguae manus fultus auxilio, cum Carthaginienses vexaret et Beticos, succedentibus cum rege suo illic Suevis, superatis etiam in congressione, qui ei ad depraedandum in adiutorium venerant Gothi, territus miserabili timore diffugit. Suevi *exin* illas Provincias magna depraedatione subvertunt.'¹⁵ If *así* thus becomes *asín* we can

¹⁴ *Studies in New-Mexican Spanish* §34, 2 and notes.

¹⁵ *España Sagrada* IV 386.

then explain *ansín* as due to regressive assimilation and then *ansí* by dissimilation of the nasal elements.

However, if we assume that the real source or another source is *ac sic*, then the phonetic history of the Spanish forms is as follows. *Ac sic* gives first *assí* by assimilation as already explained. Then by dissimilation we get *ansí* and by simplification *así*. From *ansí* we then get *ansín* by progressive assimilation and then by dissimilation the form *asín* used by Berceo and others. *Assín* comes from *ansín* by assimilation. From *ansín* and *asín* are developed later the forms *ansina* and *asina* through the adverbial analogy of such words as *ahora*, *afuera*, *aprisa*, *ainda*, *cerca*, *nunca*, etc. And lastly the form *ansinas* is developed through analogy with *atrás*, *jamás*, *más*, *mientras*, etc.

8. *áuja*, *abuja*; *aujero*, *abujero*, *bujero*

There are sporadic examples of all these dialectic forms in the Cuentos. *Aúja* and *abuja* represent the literary *aguja* < Latin *acūcula* (REW 119), and *aujero* (pronounced both with monosyllabic and with dissyllabic *au*), *abujero* and *bujero* represent the literary *agujero* < Latin *acuculariu*. There seems to be a rather wide geographical distribution for all these forms. *Bujero* is more frequent in folk-tales from Granada, but it occurs elsewhere, and *abujero* from which it is derived is found in folk-tales from Santander, Soria, and Sevilla. The forms *áuja* and *aujero* are found only in Castilian texts. Examples follow. *Aúja*, *aujero*: Burgos 409 ('Y después le mandó la madre por un papel de *áujas* pa coser y él las escondió en un saco de paja, . . .'), 225 ('Saca el dedo por el *aujero* de la cerradura todos los días. . .'); Santander 367 (*aujero*). *Abuja*, *abujero*: Santander 98 ('Y desde tercero vía por un *bujero* todo lo que el ama hacía. '); Soria 375 ('Y San Pedro, como era un fisgón, vió por el *abujero* de la puerta . . .'); Córdoba 341 ('Y ese mismo día tuvo un hijo der tamaño de una *abuja*, . . .'). *Bujero*: Granada 46 ('Serpiente en *bujero*.'), 48, 49, 53, 147; Toledo 282; Sevilla 388; Córdoba 461.

The forms of the *Cuentos* and other similar forms are also found in the following regions of Spain and Spanish America: *áuja* and *aujero* in Aragón Argentina, Columbia, Chile, Costa Rica, Porto Rico, and Mexico;¹⁶ *abuja*, *abujero*, *abujeta*, and *abujerear* in Zamora, Salamanca,

¹⁶ Borao, *Diccionario*, s.v., Tobías Garzón, *Diccionario argentino*, Barcelona, 1910, s.v. *aujas*; Cuervo, *Apuntaciones* §774; Eliodoro Flores *Adivinanzas corrientes en Chile*, Santiago, 1911, no. 317, etc.; Carlos Gagini, *op. cit.* s.v.; Marxuach, *op. cit.*, s.v., Ramos y Duarte, *op. cit.*, s.vv.

La Montaña, Murcia, Mexico, New Mexico, and Porto Rico;¹⁷ *bujero*, *bujerear* in Salamanca, Murcia, Columbia (here also *ujero*).

The phonetic change involved in the passage of *aguja* to *aúja* > *abuja* is quite simple. In view of the fact that the complete fall of the voiced medial velar continuant *g* occurs only in words that have a suffix with the voiceless velar *j* it is clear that the fall of the weak velar *g* is in part due to dissimilation of the velar elements. When the stage *aúja* is reached the labial element of *u* is strengthened to make the dissimilation complete and the result is the bilabial continuant *b* and hence *aúja* > *abuja*. The opposite phenomenon, that is the change of either explosive or continuant *b* (or *v*) to *g*, especially when initial in a syllable before consonantal *u* + vowel, as in *bueno* > *güeno*, *abuelo* > *agüelo*, which is quite general in the Spanish dialects and not limited to Andalucía as Meyer-Lübke states,¹⁸ is due to the strengthening of the velar element of the consonantal *u* or *w* sound. In *bujero* we have an ordinary case of aphaeresis from *abujero*. The development of our Castilian *aujero* must be quite old since it is quite common in Spanish America, as noted above, and in New-Mexican Spanish it has even become *ajuero* through metathesis.¹⁹ The dissimilation of the velar elements of medial continuant *g* and *j* above indicated for the change of *aguja* to *aúja* > *abuja* takes place in La Montaña in the word *jubar* < *jugar*, the weak voiced

¹⁷ Fritz Krüger, *Studien zur Lautgeschichte westspanischer Mundarten*, Hamburg, 1914, §338; Lamano y Beneite, s.v.v.; Garcia-Lomas 42; Sevilla, *op. cit.*, s.v.; Ramos y Duarte, s.v.; *Studies in New-Mexican Spanish* §137; and Marxuach, s.v.

¹⁸ *Grammaire de langues romanes* I §416, end: 'En Andalous aussi *gu* apparait à la place de l'espagnol *bo*, *bu*.' This is one of the many false statements found in the standard works on Romance philology concerning this and many other phonetic changes found in dialectic Spanish. The majority are attributed to the Andalusians because they are found in Andalucía when they are for the most part Castilian in origin (that is found in Castile from where they were taken to Andalucía and Spanish America). In our *Cuentos* as we shall see later when we take up this special phonetic change the cases from Castile are just as numerous as those from Andalucía. It is interesting to note in this connection that the dispute about the 'supuesto andalucismo de América' defended so warmly by Wagner in *ZRPh* 1920 after being dormant for a quarter of a century, has narrowed itself now to a discussion of the *s* sounds. In fact Wagner has not been able to bring forth any facts to support the old theory with the single exception of the weak *s* that becomes a weak English *h* sound or disappears and the well-known *ll* > *y* which also in not Andalusian in origin since it took place in Leonese, Aragonese, French, etc. In fact even final *s* is often silent in some regions of Castile as in Andalusian (Menéndez Pidal, *Gramática histórica* §63, end).

¹⁹ *Studies in New-Mexican Spanish*, §212.

continuant tending to disappear always in favor of the strong voiceless velar *j* and then to produce a bilabial *b* as a transition sound after or before the labialized vowel.²⁰

9. bubulilla

This word represents, no doubt, the Spanish *abubilla*, which according to *Acad.* 15 is a 'Pájaro insectívoro, del tamaño de la tórtola, con el pico largo y algo arqueado, etc.' It is the English 'hoopoe'. This Spanish dialectism is apparently peculiar to Castile since it occurs only in one folk-tale, one from Burgos, 363: 'Y entonces el amo le dijo que había otra condicion, y era que no se podía ir pa su casa hasta que no cantara la *bubulilla*.' The word occurs again on page 364 (two times) and on page 365 (four times). In other versions of this tale the bird in question is the *cuquillo* (page 357) or *cuco* (page 366), English 'cuckoo'.

Bubulilla is not derived from the literary Spanish *abubilla* but is a development of an originally different Latin diminutive form of *upupa*. The most important forms of this Latin word in the Romance territory are Spanish *abubilla*, *bubulilla*, Galician *abubela*, *bubela*, French *huppe*, *boubou*, *poupou*, Provençal *pupu*, *poupu*, *apuput*, Catalanian *puput*, Italian *bubbola*, *bupola*, *puppola*, *pupu*, *bubu*, Portuguese *poupa*. Meyer-Lübke in *REW* 9076 gives Latin *upupa* as the source of some of the above Romance forms. There are, of course, all sorts of difficulties in attempting to derive all these words from Latin *upupa* or even from the diminutives *upupula*, *upupëlla*. Most of the forms agree only in one special feature, namely that all have *u* for original Latin accented *ũ* when it ought to be *o* and practically all have *u* for the unaccented Latin *ũ*, which also should be *o*. If we turn our attention to the development of the intervocalic voiceless explosives and to the presence or disappearance of the posttonic vowel the results are also confusing. The presence of *u* for accented Latin *ũ* in all of the Romance forms requires explanation. Parodi in his attempt to explain the Italian forms

²⁰ In cases like *abora* for modern *ahora*, found in La Montaña (García-Lomas 41) and Murcia (Sevilla, s.v., also contracted to *aboa*) it is difficult to say whether it is a case of *agora* > *aora* > *abora*, the labial element of *g+o* developed to *b*, or an epenthetic *b* developed before the accented *o* directly from *ahora*. In our dialectic cases above discussed it is even possible to suppose a double development, the elimination of the *g* entirely by dissimilation, *aguja* > *ájja*, on the one hand and a spontaneous and immediate change of medial *g* to *b* also through dissimilation, but I prefer the gradual change *aguja* > *ájja*, the velar element losing ground through dissimilation and the bilabial element gaining ground so that at last *abuja* is evolved.

in *Rom. Forsch.* 23. 763-4, seems to believe in the onomatopoeic influence and to support this view he quotes from Savi, *Ornitologia toscana*: 'Il nome di bubbola è stato dato a questo uccello a cagione del grido che manda in primavera. Stando nascosto, dentro gli alberi continuamente ripete *bu bu bu bu bu*, con voce sonora e forte.' Curiously enough this view that supports the idea that vocalic change alone may be explained through onomatopoeic influence has been anticipated by the *Diccionario de Autoridades*,²¹ which states, s. v. *abubilla*: 'Es ave sucia y de mal olor, de voz desgraciada y triste, pues su canto se reduce a solo *bu, bu, bu*, de donde es natural venga su origen, y no de *ave upupilla*, como siente Covarrubias. Latín *upupa*.' Parodi, however, seeks to explain only the vowel by onomatopoeia, assuming that it was already long in Latin. As a matter of fact, however, onomatopoeia, if it explains anything at all, can very well explain some of the complete forms. It seems to me that such forms as Italian *pupu*, *bubu*, French *poupu*, *pupu*, *puput*, and Catalanian *puput* are purely and simply onomatopoeic words. If for the Italians and Spanish (and in all probability also for the French and Provençals) this bird repeats the syllable *bu* or *pu*, a voiced or voiceless bilabial explosive + a long *u*, I see no reason why we should attempt to derive all these words from Latin sources, even though it may be assumed that Latin *upupa*, *upupula*, *upua* may be themselves wholly or partly onomatopoeic.²² Let us now return to the literary Spanish *abubilla* and the Castilian dialectism *bubulilla*.

Covarrubias in his *Tesoro de la lengua castellana*, Madrid, 1611, s. v. *abubilla* states: 'Este nombre Abuquilla esta compuesto de aue, y del diminutiuo de Vpupa, conuiene a saber Vpupilla, aue Vpupilla, y corrompido Abuquilla.' If we assume that the Latin accented *i* of the suffix is long the proposed etymology would not be altogether impossible, but I believe it is very improbable. I do not know of any documentary evidence that the bird in question was called *ave upupa* or *ave upupilla*. Assuming that Latin *ũ* both accented and unaccented gave *u* instead of *o* on account of the onomatopoeic influence already discussed Latin *upupula* would give in Spanish **ububla*. Cf. Italian *pupola*, *bupola*, *bubbola* (Parodi 763). A simple Spanish diminutive of this form

²¹ The *Diccionario de Autoridades* appeared in 1726-9, the work of the Italian naturalist Savi in 1827. I suspect that the suggestion of onomatopoeic influence is found long before 1726.

²² *Upua* is recorded in Du Cange, s.v. with the note: "Forte pro *upupa*."

would give **ubublilla*. Through onomatopoeia and through ordinary assimilation we would get a form **bubublilla*. Then by dissimilation we would have the dialectic Castilian form *bubulilla* of our Burgos texts. From **ubublilla* one could also by dissimilation derive a form **ububilla*. Then through syntactical phonetics *la *ububilla* > *la *bubilla* and then *l' abubilla*; and hence the regular Spanish form *abubilla*.²³ For this form, however, a Latin diminutive *upupëlla* may be assumed rather than *upupula* as a source. As is well known Spanish and other Romance languages preferred the Latin suffix *-ëllus* to *-ûlus*. Instead of Latin *monticulus*, *catulus*, *pustula*, *fibula*, the Hispanic Latin preferred the forms *monticëllus*, *catëllus*, *pustëlla*, *fibëlla*, etc., whence the old Spanish forms *monteciello*, *cadiello*, *postiella*, *febiella*, Modern Spanish *montecillo*, *postilla*, *hebilla*, etc.²⁴ *Upupëlla*, then, with *u* for *o* for the reasons above stated would give in old Spanish **ubiella* > **ubilla*. Then by regressive assimilation and through onomatopoeia **bubilla*. Agglutination with the vowel of the article would then give the regular Spanish form documented in Covarrubias, the *Diccionario de Autoridades*, etc., *la bubilla* > *l'abubilla*, and hence *abubilla*.

The Castilian dialectism of our *Cuentos*, *bubulilla*, therefore, is derived from a Hispanic **bububla* < **ububla* < *upupula*, + a regular Spanish diminutive ending *-illa*. The regular, literary Spanish *abubilla* can also be derived from **ububla* < *upupula*, but I prefer to derive it from a Latin form *upupella* for the reasons already stated. Both of the Hispanic forms are in part at least onomatopoeic.

²³ Such cases of syntactical phonetics are very common in Spanish linguistic evolution. See Cuervo, *Apuntaciones* §798.

²⁴ Grandgent, *Vulgar Latin* §42; Menéndez Pidal, *Gramática histórica española* §83. The Galician forms *abubela*, *bubela* (Cuveiro Piñol, *op. cit.*, s.vv.) may also represent the same development but with the suffix *ela* < *illa*.

(To be continued)

OLD FRENCH *Carole*

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The chief meanings of this word as registered by Godefroy, are 'round dance' and 'circle'.¹ The difficulty lies in whether it is to be traced to a Celtic etymon or to the Latin *choraules* 'a flute player'.² Skeat in the second edition of his *English Etymological Dictionary* suggested the Celtic origin. He was severely criticized by C. Nigra, in the following terms:³

Le prof. Skeat appuie son étymologie celtique sur l'autorité du *Cornish Lexicon* de Williams et cite, entre autres, les termes bret. *karoll*, corn. *carol*, gael. *carull*, etc. ['song'] dont cependant la provenance française semble bien évident.

Skeat abandoned his Celtic etymology in the subsequent editions of the dictionary and accepted *choraules* as the starting point. Joseph Loth took essentially the same point of view. He wrote that 'le gallois *carawl* ['song'] ainsi que le cornique semblent emprunter au vieux-français *carole* par l'anglais *carol*, de *choraulare*'. But he added: 'L'armoricain *coroll* "danse" = *corolla*.'⁴

Now Breton, Welsh, and Cornish *carol*, *carawl*, or *karoll*, and possibly Manx *carval*, meaning 'carol' or 'song' are obviously borrowings from the English as M. Loth believed; but Loth saw with his customary keenness that Breton *coroll* 'a dance' must be derived from something else. The semantics of his explanation that Lat. *corolla* 'little crown' > *coroll* 'a dance' have never been accepted and require no refutation here. It was by no means necessary to look so far afield.

There exists in both surviving branches of the Celtic tongue a native word *cor*, meaning 'circle'. Morris Jones gives the following history:⁵

¹ *Dictionnaire de l'ancienne langue française* etc., Paris, 1880-1901.

² First suggested by Diez in his *Etymologisches Wörterbuch der romanischen Sprachen* 539 (Bonn, 1878).

³ *Rom.* 35. 519, note 2.

⁴ *Les Mots latins dans les langues brittoniques* 145 (Paris, 1892).

⁵ *A Welsh Grammar* 159 (Oxford Press, 1913).

IE **ger-* > *κορώνη*, Lat. *curvus*, Irish *cor*, *cruind* 'round', Welsh *côr*, *crwn* 'round'. Pedersen inclines to a root **qwer-* with the cognates Ir. *corr* 'round', Gothic *hvatrbān*, and *καρπός*, *καρπάλιμος*.⁶ The modern Scotch Gaelic form of the root is *car* 'a turn or twist'.⁷ If there were any question of Latin *chōrus*⁸ (< *χορός*) being present here in Celtic dress, it would have resulted in Welsh **cur* and Irish **cuar*.⁹ Similar to the series *gwr* 'man', *gwrol* 'manly', and *gwroli* 'to act like a man' we expect and find in Welsh *cor* 'circle', *corol* (or *corawl*) 'circular', and *coroli* 'to move in a circle'. The Breton forms are the same with slight variation in spelling. Did the native Celtic word *coroli* have no part in the etymology of OF *caroler* 'to dance a round dance'?

That the postverbal *carole* (< *caroler*) had a Celtic flavor and tradition to a Frenchman of the year 1155 is evident from a passage in Wace's *Brut*. While referring to the circle of stones at Stonehenge Wace says:

Breton les solent en bretans
 Apeler *Karole* as gaïans;
 Senhange ont non en englois,
 Pieres pandues en François (8383 ff).

It remains to demolish entirely the etymology *choraules* 'flute player or chorus leader' > *coraula* > *coraulare* > *caroler* 'to dance a round dance'. This I can not do. *Choraules* certainly exists in classic Latin with the meaning noted.¹⁰ For Vulgar Latin and the later period DuCange shows that *coraula* was preserved by Petronius and Ordericus Vitalis, and *choraules* by a number of others. It retained the meaning of *jocularis* or 'minstrel' down through the 12th century. By that same period it had also acquired the secondary meaning in question, that of 'circle' or 'circular dance'; e.g. . . . 'non in morem nostrorum ordo disponitur, sed circulatim in modum coraulae sepulcrum unius multa ambiunt.' (Guibert de Nogent, *De Vita Sua*, ch. I). This would mean the following semantic changes: *choraules* 'a flute player' > *coraula* 'a jongleur' > *coraulare* 'to act as a jongleur' > *coraula* 'a round dance'. If we admit this series we must also agree, it seems, to a confusion with our Breton word *coroll* 'to dance a circular dance'. The old Welsh *cor* 'a circle' has certainly suffered a contamina-

⁶ *Vergleichende Grammatik der keltischen Sprachen* 1. 121 (Göttingen, 1909).

⁷ Macbain's *Etymological Dictionary of the Gaelic Language* 71 (Stirling, 1911).

⁸ Grandgent, *An Introduction to Vulgar Latin* §186 (Boston, 1907).

⁹ Pedersen, *ibid.*, 1. 217.

¹⁰ See Forcellini *Totius latinitatis Lexicon etc.*, Schneebergae 1831-5.

tion with Lat. *chorus*, to judge from the modern meanings of the word: 'circle; college; choir; pew; stall, crib'.¹¹

In conclusion I shall state again that the Breton *coroll* doubtless had something to do with the history of OF *caroler*. If it was not the sole etymon it must certainly have influenced the direct one, its homonym *coraulare* < *choraules*.

¹¹ Spurrell's *Welsh-English Dictionary*, Carmarthen 1920.

TWO LEXICOGRAPHIC NOTES

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I. OLD FRENCH *aleoir*

In *Aucassin et Nicolette*, VIII, 7, occurs this passage: Et li cris lieve et la noise, et li cevalier et li serjant s'arment et geurent as portes et as murs por le castel desfendre, et li borgois montent as *aleoirs* des murs, si jetent quariax et peus aguisiés. Roques simply defines 'chemin de ronde'¹; Suchier, too, has it as 'Gang auf der Festungsmauer' implying, however, that a technical connotation might be involved². It is the purpose of this note to explain what the last named editor fails to explain, namely just what this connotation is.

In our citation, it is evident that there is a contrast offered as to the method of protection adopted by the soldiers and the bourgeoisie. The former put on armor. This is the force we may rightly attach to *s'armer*, knowing that in OF *armes* could refer as well to defensive as to offensive equipment. The civilian population is not thus protected. These men are surely not to fight exposed to the arrows or crossbolts of the enemy without other protection than the crenelated breastwork. They take refuge, says the text, in the *aleoirs*, which cannot, then, refer to the almost open road on top of the walls. This is the situation as explained by a noted French archaeologist:³ 'Le chemin de ronde qui surmonte les remparts était quelquefois élargi au moyen d'encorbeillements, à l'extérieur par des hourds ou des machicoulis, à l'intérieur par un encorbeillement de pierre, une galerie ou *coursière* de bois, couverte d'un toit qui protège les défenseurs contre les projectiles lancés au-dessus du parapet.' *Coursière* is in all likelihood equivalent to the *aleoir*, for it would seem to be derived from *course*, substantive of *courir*; see, for instance, Du Cange, s.v. *Corsseria*: 'Via lustrandis vigiliis aliisque usibus accomoda, per quam de loco ad locum *curritur*', also Mistral *coursièro*, Raynouard *corsieyra*, George Sand *coursière*⁴. Now

¹ Edition of *Aucassin et Nicolette*, Glossaire.

² Edition of *Aucassin et Nicolette*, Notes.

³ C. Enlart, *Archéologie-Architecture civile et militaire* 475.

⁴ A. H. Schutz, *The Peasant Vocabulary in the Works of George Sand*, Ch. I, Art. 66.

the mediaeval Latin offers also the counterpart, if due caution prevents calling it the etymon, of *aleoir*, e.g.: 'Licentia datur faciendi aponsam supra corseriis villae, aponsatam muris tali modo quo desubtus possit transire una charrata feni et quod *alatoria* dictorum murorum maneat in statu in quo sunt de praesenti' (*Charta Tossiacensis*)⁵. Another passage cited by the same authority is more interesting: Et ibi nulli liceat facere policiu nisi in una regula, et id sine *propugnaculis et alatoriis* (*Norm Antiq. Consuet.*). On this passage, the comment is as follows: 'In hoc posteriori exemplo *Alatoria* vel *alatorium* ut *ambulacrum* ita et *alam* domus, *aile de bâtiment*, significare videtur'. Two closely related facts would appear to stamp this explanation as one of Du Cange's numerous fantasies; firstly, the suffix *-orium* is most often attached to verbs, in this case *aler*, rather than nouns, such as *ala*⁶, secondly, there is the analogy of *coursière*, to say nothing of the fact that *ambulacrum* occurs in the explanation offered in the *Glossarium*. However, the remark cited suggests that we are to think of an *aleoir* not primarily as a road but as a shelter situated on a wall, through which one can pass, which is, after all, quite a different thing.

II. MORE ON *Catellus*, *Caniculus*

Some recently noted Rumanian examples offer a curious corollary to my treatment of the question in LANGUAGE 3.6. With reference to *catulus* vs. *catellus*, the latter form alone is represented as *cățeluș* ['kəʃeluʃ] defined 'petit chien' by Damé, *Dictionnaire Roumain-Français*, Bucarest, 1893. We have also *cățelandru*, with the same meaning and *cățau* 'canaille, grec (!)'. Incidentally,⁷ the first of the two has also the meaning 'petit du renard'. Further extension of meaning is here represented by *cățel*, signifying 'larva of a bee', also 'to grow thick' said of bulbous plants. My authority, in putting *cățel d'ostoroiu* 'clove of garlic' under a separate heading, seems not to take account of a possible figure analogous to that implied in Spanish *hijuela* 'palm seed' and *hijo* 'shoot of a plant'. More striking than these facts is the existence in Rumanian, and one is led to wonder whether it is not unique in Romance, of an exact parallel to the pair *canis et cata*, that was mentioned as being offered by the grammarian Vergilius; i.e. Rumanian has *căine* as 'male dog' and *cățea* [kə'tʃa] as 'female dog'.

⁵ Du Cange, *Glossarium ad scriptores mediae et infimae latinitatis*.

⁶ Nyrop III §276.

⁷ Just as *canis* is identified with the wolf, so are derivatives of *cattus*. *Cățeli*, rendered 'être en chaleur' is further qualified by Damé with the phrase 'en parlant des chiens et des loups'. The same verb, given as 's'accoupler', is similarly qualified.

BOOK REVIEWS

Speech; Its Function and Development. Pp. xii + 363. By GRACE ANDRUS DELAGUNA. New Haven: Yale University Press, 1927.

This book is devoted to the problems that are common to linguistics and psychology. In it the psychologist would expect to find important linguistic material not usually available in the psychological periodicals, and the linguist—psychological material on speech and language which had escaped mention in the philological journals. The book is divided into three parts: the five chapters of Part I compare speech with the animal cry; the six chapters of Part II take up the author's own approach to the problems of speech from a standpoint which is described as behavioristic; the eight chapters which make up Part III are devoted to the place of speech in the life of the individual.

Attacking the conception that 'language is the expression of ideas' which Professor DeLaguna finds implicit in the theories on the origin of language proposed by Sweet, Whitney, Hermann Paul, Tylor, Bertrand Russell, Sapir, *et al.*, the author then proposes her individual-social or 'functional' point of view, best represented (19) by such questions as, 'What does speech do?' 'What objective function does it perform in human life?' She begins with the animal cry and cites the work of Craig on pigeons to show that the cry is used as a means of personal control. As stimuli for the cry she gives: certain stages in reproductive activity, the presence of the mate, the nest, the young, plus some adequate external stimulus. The cry as a stimulus releases, in others, responses which are directed, (a) immediately to the individual uttering the call, and (b) to the external stimulus of the call itself. The cry announces that something of moment is at hand and releases the appropriate response in those who hear it. It is both a proclamation and command in implicit form. Four types of proclamatory cries are distinguished: the proclamation of (a) presence or existence, (b) predication, (c) that one is about to act in a certain way, (d) that one has just acted in a certain way. The more complex cries may be regarded as substitutes for simple sentences, forming what is known in children as the sentence-word. In the evolution of the complete sentence there is a transition from the sentence-word

with its rudimentary structure, to the complete sentence with its differentiated functional parts. This results in the freeing of speech from dependence on the perceived conditions under which it is uttered, and marks a momentous change in social and psychological evolution by enormously increasing the range and extent of cooperative action.

The human infant, in addition to the specific anatomical conditions for facilitating articulate cries, possesses an innate tendency for vocal play which prepares it for learning to imitate first some of its own movements, and later the speech of others. Many acts originally performed by chance act as stimuli for their own repetition, and lead to the habit of self-imitation. The habit of imitating others follows from this. Without some capacity for disinterested social play, our ancestors would probably have never developed human speech, but after a rudimentary language has once been started it is used in a systematic way to control the behavior of others. The following are given as some of the primitive utilities which develop even when speech is rudimentary: language can be transmitted from one generation to another through social contacts and without heredity; it is an acquired form of behavior which is both individual and social; it has enabled man's progenitors to change from a defensive group to an offensive group; it is correlative to the tool; it commands the performance of particular acts and combinations of acts independently of the specific situation; speech made ground-dwelling possible without the slow acquisition of a new instinctive equipment, and the ground-dwelling conditions forced a more socialized form of relation between individuals; strategy and the division of labor were developed; there was a complete reorganization of human life.

The second part of the book is given over to the aspects of mental evolution as seen through the author's behaviorism, which is based upon monism and construes the physical stimulus in relationship to the *responsive* behavior of the organism. This establishes an order of the outer world in which the interrelationships become, through the bearing they have on man's welfare, a new or psychological order. Taking in turn some of the steps in mental evolution, Dr. DeLaguna begins with two fundamental categories of animal behavior: (a) going toward and establishing contact with some object, and (b) going away from and avoiding some stimulus. From this the psychological environment in which the simplest organisms live, falls into the two opposed positive-negative qualities of favorableness and unfavorableness. In the higher forms other psychological qualities appear which are neither positive nor negative, but indifferent. Indifferent stimuli release no specific re-

sponse, yet they are stimuli that exercise a control over the behavior of the moment. The more complex the system of behavior becomes, the greater the number of functionally independent elements of response. They are often stimuli to their own repetition and so far are intrinsically pleasant. Often external stimuli, in themselves indifferent, acquire affective quality in that they independently call out reactions which serve to keep the animal adjusted to continued or repeated stimulation of the same sort. The response is defined as a movement or series of complex movements taken in their objective relation to some more or less distinct *end* which is normally served, rather than as a definite bodily movement regarded as a change in spatial position. The response is a functional and adaptive unit, but such teleological terms as purposive, aimless, and end, are to be understood quite objectively and without reference to what is commonly called conscious purpose or intention. The modifiability of responses increases enormously with psychological evolution. Behavior is intelligent in proportion as it is characterized by the selective attention which analyzes out identifiable features of the total situation. Pleasantness and unpleasantness are regarded (166) as unsatisfactory principles of explanation in the learning process because it has not been shown how pleasantness or unpleasantness contribute to learning. It seems to the present reviewer that after such a statement one would not expect to find language changes based upon pleasantness or unpleasantness, yet again and again the author introduces these affective properties of the response as important factors in speech modification. This the reviewer regards as the greatest fault in the book and virtually reduces her behaviorism to a mere negation, *i.e.*, a series of statements that a mentalistic psychology is *not* adequate to account for the facts of human behavior.

Learning is said to involve a transfer of the affective qualities of the adaptive act to the new modifications that are added to it. The fixing of attention on a given stimulus means that this stimulus is playing a central rôle in determining behavior, and is acquiring the affective quality of the complete act. The tendency to anticipate the final stage of an act prepares the organism for specific action and also reinforces the course of action that has been initiated so as to assure its being carried to completion. The pleasantness attaches primarily to the act as a whole. It is only as completed that an act tends to repeat itself. In a supplementary note the author indicates that her theory of human behavior has much in common with the *Gestalttheorie* of the Germans.

In cognition man has developed a new and distinctive level of behavior

in dealing with the objective world. The cognitive element is the part of the stimulus which determines the way the act will be done. The affective element determines the ends of the action. Affection and cognition, then, are aspects of all behavior. In objectification, the whole situation becomes resolvable into more or less discriminable factors. An object is objectified just in proportion as it calls for systematic and constant variations in behavior. In the social situation behavior is controlled by two (or more) distinct stimulus centers, each of which is a functionally independent determinant of response, and which act correlatively and reciprocally in their control over response. In cooperative activity this new type of behavior reaches its highest development—speech and the use of tools.

In Part III, Dr. DeLaguna considers the rôle of speech in the life of the individual. The animal cry is partly an instinctive response to a type situation, partly an acquired response learned by imitation under the conditions of group life. Two elements in the cry as heard are distinguished: (a) the kind of cry or the cry as such, (b) the setting in which the cry is given. From the cry the sentence-word is developed and it differs from the cry in that it is a response to the situation as perceived or otherwise cognized (not as felt) and is always used in a concrete context which gives it its particular meaning. The word is not prior to the sentence. It is only in the functionally differentiated elements of the complete sentence that true words come into existence. Perception arises when language becomes independent either as a mode of behavior or as an organized system of symbolic representations.

Conception appears in the guidance of acts which have as their end the bringing about of an objective state of affairs rather than one which is determined by its relationship to the immediate needs of the individual. In the complete act of speech the final stage of the act, particularly its affective outcome, is anticipated by an *utterance*, overt or tentative, of some word or phrase. In completely purposive behavior the anticipated end and the antecedent condition reciprocally determine beforehand, in a progressive fashion, an organized series of intermediate acts. Values are regarded as social phenomena dependent on language for their apprehension. Language through the objectivity and universality of what its terms represent, and the autonomy of its structure, reveals the distinctive ends of human conduct and endows their pursuit with rational purposiveness.

Passing on to the more typically psychological properties of human behavior, the author next considers memory as a primitive endowment

of animal organisms which appears first in the service of immediate action. At this stage it is not so much a revival of the past, as an anticipation of the future. 'Satisfactions and delights actually enjoyed in the past are desired afresh, and this desire may lead to a reminiscent living over the past as it occurred' (314). When the same speech reactions occur, they tend to revive along with them an incipient repetition of the original bodily movements and even of the induced sensory stimulations which they originally mediated. The objectification of one's own or another's behavior arises in this way and terminates in the relatively autonomous form of behavior known as conversation. Belief and thought attach directly to that phase of primitive conversation whose end is the formulation in language of the relevant objective features of the situation. A belief leads to specific expectations on appropriate occasions. Thinking is described as a form of internal discussion in which there is a reformulation of the ends of action through a reformulation of the intermediate steps. In the activity of thinking itself, speech reaches the highest and most typical of its autonomous functions. The form of conversation from which thought springs is the discussion, and this has for its final but often very remote end, agreement among the participants regarding some specific conditions of common action.

Considering the book as a whole, the reviewer finds Professor DeLaguna opposed to 'language as an expression of [subjective] ideas'; but the terms selective attention, desire, pleasantness, and unpleasantness (which are just as subjective) are used by her so uncritically as modifiers of action, that the reader is justified in assuming that she has merely substituted one set of subjective terms for another. While for the reviewer her behaviorism does rest upon an objective basis, this basis is not at all clearly presented, nor could it be isolated by one who is not already a behaviorist. For the linguist the book fails in its lack of the elaboration of those environmental, sensorimotor, ontogenetic, and phylogenetic conditions which go beyond the facts already well known to him. That speech is a form of social behavior has been proclaimed by the linguists for the last fifty years, especially in what they call their speaker-hearer problem. Some of the modern linguists are already more behavioristic than Dr. DeLaguna. When they say that language changes are so complex that no linguistic or psychological laws underlying them have been isolated, they are demanding a degree of specificity which her vague generalizations cannot meet. From the psychological point of view the reviewer believes that Professor DeLaguna is trying to develop a scientific system but her treatment of learning, which

is the modern test of any psychological system, gives us only the following factors; an innate capacity to move toward or away from a stimulus; action units which are indifferent and which tend to supplement or interfere with whatever adaptive behavior series is in progress at the time. If these principles were consistently applied there would be no objection, but it is asking too much of either the lay or the scientific reader to constantly reinterpret statements such as the following, into the author's own system: 'The child takes delight in the performance of this new activity [use of words] just as he has taken delight in his coos and gurgles, but the success of this activity is measured by the approval and confirmation expressed by his companions' (270).

For the benefit of the linguists the reviewer presents the following outline of what he regards as DeLaguna's contribution to the psychology of language. There are two fundamental laws of animal behavior, (a) going toward an object and establishing contact, (b) going away from an object or avoiding the stimulus. In the higher forms there are in addition indifferent stimuli and indifferent reactions which are neither positive or negative (in the preceding sense) and which may serve as stimuli to their own repetition, and in this way supplement or interfere with the positive or negative [adaptive] reactions of the moment. One form of these indifferent stimuli and reactions is man's innate capacity to vocalize; he probably has an innate capacity for vocal play; this leads to the development of autonomous series of reactions, sentence-words, words, sentence structure; this develops into conversation between individuals; and conversation leads, directly or indirectly, to group action which is a preparation of the individuals for the various rôles they are to play in a social organization.

The reviewer is fully aware that the problem which the author has set herself is one of the most difficult and at the same time one of the most important problems of social science. One cannot expect in a pioneer work, such as this, that wealth of verified detail, and such precision, organization, and presentation, as may be expected a hundred years hence. It is gratifying that one whose contributions to the field of systematic psychology are so well known as those of Dr. DeLaguna, has had the courage to bring together in a single volume a part of what is known of the relation between linguistics and modern psychology.

ALBERT P. WEISS

La Méthode Comparative en Linguistique Historique. Pp. viii + 116.
By A. MEILLET. Oslo: H. Aschehoug & Co. (W. Nygaard), 1925.

M. Meillet has given to the public in this little volume the substance of a series of lectures that he delivered at Oslo (Christiania), before the Instituttet for Sammenlignende Kulturforskning. It is a plea for scientific exactness in the study of linguistic phenomena; and it urges not only the comparative study of languages as such, but also that they be thoroughly examined in their relations to other social usages:

Il importe de mettre en contact tous les savants qui s'occupent de l'homme et de ses civilisations à tous égards; une langue ne se comprend pas si l'on n'a pas une idée des conditions où vit la population qui l'emploie; et l'on ne peut davantage comprendre vraiment une religion ou des usages sociaux sans connaître la langue des hommes qui pratiquent ces usages. (vi)

The statement is made (vi f.) that the modern Romance languages are derived from spoken Latin and not from the Latin that was written. This is quite true if by written Latin one means the belles-lettres of the classical period, for these were written in a Latin that was artificial in word order, a Hellenized Latin that was never used in conversation except by the relatively few high priests of Greek culture, in short a Latin that the common man in Rome could not understand without much study. By the third century of our era written Latin differed in form from spoken Latin as much as written English differs today from spoken English. We still write *enough*, *though*, *sew*, *colonel*, etc., and the Romans continued to write *pilum* (for *pelo*), *bullā* (for *bolla*), *ipse* (for *esse*), *mensem* (for *mese*), *quinque* (for *cinque*), *amavi* (for *amai*), etc.

Those who wrote and read literary Latin kept the old spelling, but there is not the slightest evidence that they kept the old pronunciation. They probably did not keep it any more than we keep it in English *tonight*. Even in the classical period *m* final in a word, except in a few monosyllables, seems to have disappeared in the living, spoken language. The poets generally disregarded it in synaloepha, although they continued to write it. Meillet (15) says: 'Cette nasale finale se prononçait faiblement.' There is not sufficient evidence that it was pronounced at all at that time. Many pencilled and painted inscriptions omit it and there is no trace of it in the Romance languages, except in a few monosyllables, and in these it generally appears as *n*. Later in medieval Latin, when the separation of the vernacular from Latin became so great that by no compromise could they longer be considered one language, the final *m* was pronounced again when reading Latin.

M. Meillet, by the way, says: 'Cette nasale ne s'est maintenue que dans le monosyllabe accentué *rem* qui a abouti à français *rien*'. He

should add *mon* and *mien* (from *meum*), *ton* and *tien* < *tuen* (from *tuum*), and *son* and *sien* < *suen* (from *suum*) for French, and *quien* (from *quem*) and its derivatives for Spanish, and *quem* and its derivatives for Portuguese.

The statement is made (13) that 'à la date où s'est brisé l'Empire romain, la déclinaison subsistait et jouait encore un grand rôle'. This can neither be proved nor disproved, but I doubt it. In the *Peregrinatio*, for instance, the author strives to write literary Latin; she uses the *r*-passive and she uses datives and ablatives in *-is* and *-bus*, but I find no occasion to believe that she used any of these in conversation. The general confusion in the use of case endings with prepositions seems to indicate that for the author their use was quite artificial. I see no reason to believe that she used in conversation more than two cases—a subject form and an object form.

M. Meillet is of the opinion that there is not 'aucun trait commun' in the *Petri* of *Petri liber* and the *de Pierre* of *le livre de Pierre*. But the process is quite similar save for the position of the particle that denotes possession. Note also that in French the definite article is prefixed; in Rumanian it is postfixed. But this does not indicate that in the use of the definite article these two languages do not have 'aucun trait commun'.

The author calls attention to the fact that in the modern Romance languages the system of the inflection of nouns by case endings is lost, while the inflection of verbs is still largely preserved (29 f.). This is interesting and true. M. Meillet adds that 'encore aujourd'hui, dans les langues indo-européennes, la distinction du nom et du verbe est demeurée nette partout'. He is speaking of the forms of nouns and verbs, 'où chaque mot portait en lui-même la marque de son rôle dans la phrase', and he evidently overlooked English. For in English the distinction in form between noun and verb is lost, and a word, without change of form, often serves as either: thus, 'I bought a *saw*', 'I *saw* wood daily'; 'I killed a *fly*', 'men now *fly* like birds'; etc. In fact, most English words can be used as either verbs or nouns without change of form if only the sense permits.

In any language the vocabulary is the least stable element (33). The instability, I should say, depends on change in environment. Mention is made of the fact that 'le tzigane arménien a une morphologie et une phonétique tout arméniennes et un vocabulaire tout tzigane'. It is likewise true that the language of the Spanish gitanos, if I may judge from the grammars and dictionaries that I have examined, has a vocabu-

lary of its own, but regularly uses the flexional endings of Spanish verbs.

M. Meillet supports the theory that

s'il y a des moments où le changement linguistique semble se précipiter, cela tient pour beaucoup à ce qu'il y a, pour les innovations, une longue période de préparation. . . . Le changement de *caballum* en *cheval*, qui s'est fait assez vite, est ce qui se voit. La préparation de ce changement a demandé de longs siècles et ne se voit guère. . . . Ce que l'on observe en général dans les langues indo-européennes, c'est le résultat de débâcles brusques, consécutives à des périodes de préparation (45ff.).

I am of the opinion that this theory can be accepted only in so far as it applies to written languages that have literary or official sanction. Thus, there is a striking change from classical Latin to the literary French of the eleventh century, and there is no doubt that this change is the result of a long period of preparation. But, during all those centuries, was not the living, spoken language slowly but continuously changing its forms and its vocabulary? Everything points that way, except that the changes were accelerated during periods of social and political confusion, and slackened when there was peace and order. The change from *caballum* to *cheval*, 'qui s'est fait assez vite', according to M. Meillet, was probably not made so quickly as the written texts might seem to indicate. It is well known that the Old Latin endings of the second declension were *-os*, *-om*, etc., and there is no satisfactory evidence that the provinces followed suit when Rome adopted *-us*, *-um*. In fact, the survival of *-o* in Italian tends to indicate that they did not. How early Vulgar Latin [*kaballo*] became [*kjaval(lo)*], or something of the sort, in Gaul, we do not know, but the complete change from *caballo* to modern French *cheval* took about a thousand years—at the time of the Norman conquest of England, *ch* was still pronounced as it is in modern English—and we must not forget that a year was as long then as it is now.

'Il n'y a presque pas un peuple qui n'ait changé de langue au moins une fois, et généralement plus d'une fois' (72). This is true enough, although the fact is frequently overlooked by those who undertake to classify races according to the languages they speak. In Mexico and Peru the majority of the people are American Indians, but the official and literary language of both countries is Spanish, and there is every reason to believe that in time the many Indian languages will disappear entirely and Spanish will be the common language of all Mexicans and Peruvians.

On page 80 M. Meillet speaks of 'une hérédité d'habitudes acquises par les sujets parlant gaulois', and again 'de certaines habitudes acquises

transmises par hérédité.' The theory that distinctive speech habits among Europeans are inherited has not been proved, so far as I know.¹ Language is chiefly a social convention, and it seems to depend on environment rather than on heredity. I know the children of Germans and Frenchmen who speak English without the slightest trace of a foreign accent. Until some definite scientific evidence has been offered, I am loath to believe that the vocal organs of a German or a French infant are different, either in shape or in nervous control, from those of an English infant. There is no doubt that the Irish peasants speak English with an Irish-Celtic accent, but I believe that this is the result of traditional speech habits rather than that of inherited characteristics.

M. Meillet remarks (89) that 'il n'y a aucune raison de croire que le roman initial (dit latin vulgaire) ait eu un accent bien intense, et l'on sait que l'accent du français actuel comporte une très faible intensité'. It is quite true that the accent of intensity is weak in French, but it is stronger in Italian, which is nearer to Vulgar Latin. There is reason to believe that the relatively even stress of syllables in modern French is due to the loss of the unstressed final vowels. Italian, which has kept the unstressed final -a, -e, and -o of Vulgar Latin, has a much stronger syllabic stress. Moreover, experiments have shown that in Spanish, at least, the accented syllables have length as well as stress. The reader is referred to the various publications of Tomás Navarro Tomás as reported in the *Revista de Filología Española*.

On pages 114-6, M. Meillet has undertaken to illustrate certain linguistic problems by reference to the history of English in America, and in these paragraphs, I regret to say, the data that he uses are largely inexact. In the first place, he states that 'l'anglais est moins résistant au changement que le français', and he does so in spite of the fact that the history of English and of French in America leads to the opposite conclusion. The English of America is remarkably uniform, and there is no part of the United States where a Londoner has the slightest difficulty in understanding the speech of the common people or in making himself understood. The Londoner notes certain differences in pronunciation and in vocabulary, but, after all, these differences are no greater than those that exist between the speech of London and that of any one of

¹ A careful reading of J. van Ginneken, *Die Erbllichkeit der Lautgesetze*, *Indogerman. Forsch.* 45. 1-44, 1927, leaves me unconvinced. The thick lips of central African negroes may affect their bilabial sounds and their flat noses may affect their nasals, but I can find no convincing evidence that the western European races have distinctive speech characteristics that are due to hereditary physical causes.

several outlying English districts. On the other hand, the French of America has shown little 'résistance.' There are many largely divergent dialects of French in Canada. I spent five summers in a French-speaking community in the Montreal district and the results of my study of the dialect that is spoken there have been printed by the Modern Language Association of America.² It is my conviction that a Parisian would not understand the common language of the district that was studied. And the common French of the Haitians and that of the Acadians in Louisiana differ from each other and each differs from the Canadian French dialects to such a degree that if unlettered Canadians, Haitians, and Acadians should happen to come together, I doubt that a member of any one of the three groups could understand or make himself understood by a member of another group except with the greatest difficulty.

Attention has frequently been called to the fact that Spanish too is more 'résistant' than French. When a Chilean converses with a Mexican, for instance, one can observe a difference in intonation and occasionally a difference in vocabulary, and that is all. It is, however, really futile to speak of the 'résistance' of any language, as if a language had a separate existence, but if the term is applied to the English, the Spanish, and the French of America, M. Meillet's statement should be revised and made to read as follows: *le français est moins résistant au changement que l'anglais ou l'espagnol.*

With regard to the influence of the immigrants of foreign speech on American English M. Meillet offers data that are inexact, as when he says that the proportion of foreign-born is greater in the western states than in the eastern states. According to the census of 1920 the percentage of foreign-born in the New England and Middle Atlantic states was 23.1, while the percentage in the East North Central States was 15.1 and in the West North Central States 11.0.

M. Meillet says that in the United States English is spoken by a majority of people with whom the tradition of English speech is recent and of whom many are bilingual. This statement, however, is probably more nearly true of the French of France than of the English of America. The majority of Frenchmen are still bilingual and their mother tongue is Provençal, Basque, Gascon, Breton, Normand, Alsatian German, Savoyard, Corsican, etc. For this majority north central French is still a cultural language and they speak it, as M. Meillet acknowledges, 'd'une manière spéciale et qui d'ailleurs diffère d'une région à l'autre.'

E. C. HILLS

² See 'Notes on Canadian French,' *Publications of the Mod. Lang. Assoc. of America*, July 1903, 363-77.

La Chanson de Sainte Foy. Pp. 376 and 276. By E. HOEPFNER and P. ALFARIC. (Publications de la Faculté de Lettres de l'Université de Strasbourg, fasc. 32, 33) Paris: 1926.

La Chanson de Sainte Foy d'Agen; poème provençal du xi^e siècle édité d'après le manuscrit de Leide. Pp. xxxviii + 88. By ANTOINE THOMAS. (Les classiques français du moyen âge, No. 45) Paris: 1925.

After a long period of neglect this interesting linguistic monument of early Provençal, rediscovered and edited in 1901 by Professor J. Leite de Vasconcellos, has recently had the honor of two editions, both excellent in their way. The small volume of Antoine Thomas conforms in shape and size to the series in which it appears, yet the editor has succeeded in packing into this restricted space all that is really necessary for an understanding of the poem. It is a marvel of condensation, and does very great credit to the distinguished 'Provençaliste' who edited it. The larger work by Hoepfner and Alfaric is planned on a much more generous scale, and comes near to being 'exhaustive'. But even so it cannot be said that all the linguistic problems found in this early text are yet solved.

Thomas in his Introduction, after a brief synopsis of the poem and a discussion of its sources,¹ gives an account of the rediscovery of the text and a history of the manuscript. Then follows a discussion of the date of the poem (1033-66), its language, versification and origin (department of the Aude, region of Narbonne). Next comes a facsimile of the manuscript, with a slightly emended critical text on the opposite page, a translation, notes, index, and glossary.

The first volume of the Strasbourg publication is entirely by Professor Hoepfner. It contains, in the third part, a beautifully executed photographic facsimile of the manuscript, a critical text with very elaborate notes, and a glossary. The first part gives the history of the text and a description of the manuscript. The story of the vicissitudes of the latter is full of interest. It belonged originally to the celebrated abbey of Fleury-sur-Loire, and was probably executed there, toward the year 1100, another indication of the important part played by that monastery in medieval literature. The second part is a study of the language of the poem, containing nearly two hundred pages and examining in detail all the linguistic phenomena found in the text. It thus presents us with a

¹ He was evidently unacquainted with the 'Passio metrica' of Saint Fides, reprinted by Alfaric in his second volume, which was undoubtedly used by the Provençal poet.

well documented description of the beginnings of a Romance language. Almost no other early Romance text has had such a minute and painstaking study. Of course, it is impossible always to agree with Hoepfner's conclusions; but one can only do homage to his industry, his thoroughness and his evident desire to weigh all the evidence. His final conclusion that 'la langue . . . n'en reste pas moins celle de la région narbonnaise' agrees almost exactly with that of Thomas and may be accepted as proven. The third part is a literary study of the poem. The characteristic traits of the poet and his work are noted with care. I doubt however if most unprejudiced readers will endorse the admiration of the Strasbourg editors for this rude and ill constructed composition. The reserve expressed by M. Thomas seems to me more justified.

The second volume, entirely by Alfarc, is devoted to an historical study of the text. His conclusions are sometimes rather extreme. For instance, his efforts (5-16) to fix the place of origin in the monastery of Cuxa in the Cerdagne seem not in harmony with the linguistic data, which apparently exclude the Catalan region. He strives likewise to prove that the poet possessed an extended theological culture, that he knew at first hand Saint Augustine (54-5), Isidore of Seville (55) and the pseudo-Dionysius the Areopagite (55). The general formulae employed by the poet may be matched in many *chansons de geste*. The author's culture seems to me, as to Thomas, confused and fragmentary. He may have been a 'clerc', but he was assuredly not a learned one. Nor can I believe that our text was intended to be a 'chanson de danse'. The song which is 'bella'n tresca' (v. 14) is the Latin original which the poet had heard read by the 'clerczons' and the 'gramadis', not his own work. Nevertheless, this second volume contains much valuable material, especially a French translation of the chanson with an abundant historical commentary, and a reprint of the two Latin *Passions* on which it is based.

The two editors differ sharply as to the method of dividing the text into *laissez* or stanzas. Hoepfner follows the manuscript, which indicates the beginning of each *laisse* by a capital letter. This divides the 593 verses of the poem into 55 *laissez*, all composed of an odd number of lines. Thomas on the contrary unites two successive *laissez* of the manuscript when they end in the same rime, thus reducing the number of stanzas to 49. It seems impossible to decide which method is correct. I incline to believe however that Hoepfner is right. The fact that all the *laissez* apart from the few in question contain an odd number of

verses raises a strong presumption that this arrangement was intended by the author.

The text, owing to its antiquity and its localized character, contains many noteworthy words and forms not found elsewhere, but which once must have been a part of the common Vulgar Latin word stock. Such are, for example, *oz* < *otium*, *somjon* < **summionem*, *adag* < *adaequo*, *noelz* < **nodellos*, *fan* < *fanum*, *matz* (of Teutonic origin, but nominative form of the word represented in French and Provençal by the accusative *maçon*), *neoz* < *negotium*, *amir* < *admiro*, *truncs* < *truncus*, *gavis* < *gavisus*. None of these is found in other Romance texts.

It is impossible, through lack of space, here to discuss many problems of a linguistic nature contained in the text. I shall consider only a few points which concern the linguistic introduction and the interpretation of the text.

P. 70. Hoepfner labors hard to explain away all the forms which show a loss of intervocalic *d* (*raiz* < *radicem*, for example), but not, it seems to me, with complete success. Why can we not admit, for these words, a dialect mixture, as the editor is inclined to do elsewhere (125)? The fact that the copy of the text which we possess was written far from its place of origin would indicate that the language had already become conventionalized. Moreover, early Romance texts without dialect mixture are almost unknown.

P. 108. The use of *melius* as adverb of comparison (*meilz aiziu*, 'more suitable', v. 409) is more widely spread in Provençal than Hoepfner admits. Besides the examples cited by Diez (*Rom. Gram.* III, 10) one can find instances of this form in Marcabru (ed. Dejeanne, XV, 9, XXVIII, 16), Bernart de Ventadour (ed. Appel, XXII, 60) and Peire d'Auvergne (ed. Zenker, VIII, 19).

P. 108. The remarkable form known as the 'Pyrenean article', *czo*, *cza*, 'tz, found several times in the text, is discussed at length by both editors. Thomas' etymology (**ecce eum*) seems to me more plausible than the various conjectures of Hoepfner. It may here be remarked that it is not absolutely necessary to interpret the *czo* of v. 288:

Czo vostre cabs n'er totz sanglentz,

as the masculine nominative of this form. It may represent the neuter demonstrative *ecce hoc*, in the peculiar syntactic construction found for example vv. 91, 282, and discussed by Hoepfner on p. 167.

P. 135, note 3. It may not be without interest to remark that the forms mentioned here which show a reduction of *ts* to *t* are very common

in the Provençal *Passion* of the fourteenth century, soon to appear as one of the publications of the *Société des anciens textes français*.

P. 147, note 7. The perfect form *nasc* (comparable to *mesc*, v. 42 and *irasc*, v. 285), is likewise found in the *Passion*.

Remarks on the text:

v. 4. As M. Hoepfner justly remarks, the form *declin* of this line affords a plausible explanation of the much discussed *declinet* of the *Chanson de Roland*, v. 4002.

v. 32: *Aisi con'l guida'l primers tons*.

The expression, discussed by Alfarc, 2. 72-3, resembles one found in a *pastourelle* of Thibaut de Champagne (ed. Wallensköld, 52, 5): *Et disoit un son premier*.

v. 146; *folz e bazans*.

In attaching the latter word to Latin *vesanus* Hoepfner seems to me to 'faire trop bon marché de la phonétique'.

v. 162: *Qe'nz fa estar de lei marriz*.

Hoepfner's interpretation of *de lei*, 'à son sujet', seems to me preferable to that of Thomas, 'de la loi'. Would not an emendation to *deleiz* (Lat. *delictos*) remove all difficulty? To be sure, *delictum* appears in later Provençal only as a substantive; but the text contains so many older meanings that its use here as an adjective would not be surprising. The copyist may have misunderstood the word as *de leis*, which he then corrected to *de lei*.

v. 227. *ant*. I fail to understand what Hoepfner means in saying that this form (< *ante*) explains the more recent form *am* (< *apud*).

v. 300: *Nun voill eu aital deu cabdorn*.

The word *cabdorn* is not satisfactorily explained by either editor; nor is the sense of the line perfectly evident. To my mind, *cabdorn* represents the first person singular, present subjunctive, of some verb.

v. 446: *S'ad ella ven hom cegs o muz,*

O passions molt lo traüz,

O s'em preison es reteguz,

Hoepfner here interprets the form *traüz* as the present subjunctive of a verb *traüzar* (**tributiare*), unknown elsewhere. But the parallel sentences all have the indicative, so that Thomas' explanation (< *traduciü*) is more plausible.

v. 459.: *Pejor fortun* (sc. the persecutors) *qaici non aus*. Hoepfner interprets this as: 'ils furent pires que vous n'entendez ici.' This is possible, but the phrasing is very odd, especially as the adverb *aici* is not found elsewhere in the poem. Thomas prints *Aisinonau*, but is

unable to identify this personage. I believe likewise that some proper name is intended; but the text is probably corrupt.

Misprints are very rare. I have noted in the Strasbourg edition, vol. I, only the following: p. 89, note 3: read 574, for 547. p. 259: the variant to line 41 belongs on the following page. p. 273, line 116 of the text: for *to*, read *fo*.

WILLIAM P. SHEPARD

W. Meyer-Lübke, Introducción a la lingüística románica. Versión de la tercera edición alemana, con notas y adiciones. Pp. 463. By AMÉRICO CASTRO. Madrid: Centro de Estudios Históricos, 1927.

Students of Romance philology and general linguistics are all acquainted with the *Einführung in das Studium der romanischen Sprachwissenschaft*, and those to whom German was not a mother tongue must have all welcomed the excellently arranged and accurately translated Spanish edition published by Professor Castro in 1914, of the second German edition. That work contained many additions which made it at once extremely popular with students of Romance philology. The new edition, an entirely new work, a careful translation of the third German edition with numerous additions and notes is an introduction into the field of general Romance philology absolutely indispensable to students of Romance philology and may be called beyond question the latest, most authoritative, and best manual in the subject. Those of us who years ago struggled patiently with the first German edition, which I must frankly confess was not always as clear and well arranged as it could have been from a non-German view-point, read the new Spanish translation by Castro with the pleasure of the child that discovers he can actually read every page of a new primer placed in his hands.

While the value of the new translation is great to all students of Romance linguistics, for certainly most of them can read Spanish with greater facility than German, it is especially valuable to those that are studying Spanish philology, a field that Castro knows much better than Meyer-Lübke, thanks to the activities of the school of Menéndez Pidal in Spain in recent years that has carried on the work of Romance philology with special attention to Spanish in a manner without parallel in the history of linguistic science. In many respects the *Einführung* presented opinions quite at variance with recent investigations. It is a great pity, for example, that Meyer-Lübke continues to state that in Santo Domingo there is spoken negro-Spanish and that Andalusian is a Spanish dialect in the same sense that Castilian, Leonese, and Aragonese

are. These are small matters of detail, to be sure, but they give the student wrong impressions from the start on the authority of a great scholar that are difficult to eradicate. Professor Castro has numerous additions and notes that call attention to many of these details, presenting in some cases opinions quite contrary to those of the author of the *Einführung*. The book is admirably arranged and printed so that the additions and notes of the translator stand out separately from the body of the original.

Teachers and students of Romance philology owe a great debt of gratitude to Castro for this excellent Spanish translation of Meyer-Lübke's famous work with the invaluable additions and notes. It is certainly the vade-mecum of the student of Romance philology.

AURELIO M. ESPINOSA

Smulski's Dictionary; An English-Polish and Polish-English Dictionary. Pp. 425 + viii. By T. M. WILDE. Chicago: Polish-American Publishing Co., 1928.

It is not the purpose of LANGUAGE to notice ordinarily books intended for practical uses. For some languages, however, our equipment is so meagre that works like this one become of value to the scientist, and then a deviation from the ordinary practise seems desirable.

This book, undertaken with the support and coöperation of Mr. John F. Smulski, a leader among the Chicago Polish-Americans, is probably the best modern dictionary of the two languages. It contains twenty thousand English words and sixteen thousand Polish words and they seem to be well selected. It may be regretted that examples of idiomatic uses of these words were not added, but this would have increased the size of the volume, which is intended as a practical pocket dictionary. The summaries of the pronunciation of the English and Polish alphabets is also good from a purely practical standpoint, and the conversations at the end are frankly adapted for the needs of the non-English speaking Pole who is endeavoring to orient himself in this country. In all these purposes the volume reaches its goal, and it cannot be neglected by scholars and literary people who are looking for a concise instrument to aid them in the understanding and writing of Polish. It is a very good sign of the increasing importance of the Polish language that this dictionary has been published, and we can welcome it as a valuable means of rendering the Polish language more intelligible to the American intellectual world.

CLARENCE A. MANNING

NOTES AND PERSONALIA

THE LINGUISTIC INSTITUTE was approved by the Society at the Cincinnati meeting, as is related in the Proceedings of the Meeting, printed in this issue of *LANGUAGE*. Professor Edgar Howard Sturtevant of Yale University was appointed Director of the Institute, and Professor Reinhold Eugene Saleski of Bethany College (Bethany, W. Va.) was appointed Assistant Director. The Director, the Assistant Director, and the Secretary of the Society form the Administrative Committee of the Institute. Circulars have been sent out, with descriptions of the courses offered; in all, there are thirty-seven courses, given by twenty-three scholars from fourteen institutions of learning. The Committee asks the active support of all members of the Linguistic Society to make the Institute a success in this year. Especially it requests that intending students should at once send in their names and addresses, that an estimate of the number in attendance may be made, to the Linguistic Institute, Box 1849, Yale Station, New Haven, Connecticut.

Of the papers read at the Third Annual Meeting of the Linguistic Society, some have not yet been presented for publication, or are being held for incorporation in larger works; but the following have appeared in print, or are about to be issued:

- B. M. Allen, *The Accusative and Ablative of Degree of Difference*; in *Proceedings of the American Philological Association*, 57. xxxvi (abstract only).
- S. E. Bassett, *The So-called Emphatic Position of the Runover Word in the Homeric Hexameter*; in *Transactions of the American Philological Association*, 57. 116-148.
- G. M. Bolling, *Kandaules*; in *Language* 3. 15-18.
- C. D. Buck, *A New Darius Inscription*; in *Language* 3. 1-5.
- Edith F. Claffin, *The Nature of the Latin Passive in the Light of Recent Discoveries*; in *American Journal of Philology* 48. 157-75 (abstract also in *PAPA* 57. xxxvi-vii).
- C. C. Fries, *The Expression of the Future*; in *Language* 3. 87-95.
- E. Adelaide Hahn, *The "ab urbe condita" Type of Expression in Greek and English*; in *Classical Journal* 23. 266-74 (abstract in *PAPA* 57. xxxv).

- W. Jochelson, *The Instrumental and the Comitative in the Aleut Language*; in *Language* 3. 9-11.
- R. G. Kent, *The -tt- in Latin Quattuor*; in *Language* 3. 12-4.
- R. G. Kent, *Word Contamination in the Italic Dialects*; in *TAPA* 57. 51-9.
- C. M. Lotspeich, *A Single Principle for English and Primitive Germanic Sound Changes*; in *Journal of English and German Philology* 26. 467 ff.
- G. L. Malécot, *A Note on Gesture and Language*; in *Quarterly Journal of Speech Education* 13. 439-42.
- Louise Pound, *The Etymology of an English Expletive*; in *Language* 3. 96-9.
- E. H. Sturtevant, *Hittite h initial = Indo-European bh*; in *Language* 3. 109-22.
- E. H. Sturtevant, *Indic Speech and Religion in Western Asia*; soon to appear in *Yale Studies in Classical Philology* (abstract in *PAPA* 57. xxxiv-v).
- J. Whatmough, *On the Phonology of the Messapic Dialect*; in *Language* 3. 226-31 (abstract in *PAPA* 57. xxxiv).

Ettalene M. Grice, who entered into membership in the Linguistic Society in 1927, died at Hartford, Connecticut, on December 4, 1927.

Miss Grice received the degree of A.B. in 1908 from the Western College for Women, Oxford, Ohio. She began the study of Semitic languages in the graduate school of Bryn Mawr College in 1912, and later continued her work at Yale University, where she received the degree of Ph.D. in 1917, with her dissertation on *Tablets from Ur and Larsa, dated in the Larsa Dynasty*. She was then appointed Research Associate in Assyriology and Babylonian Literature, and Assistant Curator of the Babylonian Collection, at Yale University. Her position as Research Associate gave her the rank of Assistant Professor, and thereby she was the first woman to hold a professorship of Semitics in an American University. She was active in the work of the Oriental Society of America, and a regular participant in its meetings. For a number of years before her death she had been compiling a list of Sumerian-Accadian ideograms with their interpretations as given in the ancient vocabularies. Practically all the material had been collected, and publication was to have started during 1928.

Miss Grice was a woman of quick sympathies and attractive per-

sonality, as well as a profound scholar. She will be missed by many friends in this country and abroad.

Dr. J. Alden Mason, of the University of Pennsylvania Museum, left in January to spend two months among the Yaqui and Pima Indians of Southern Arizona, where he planned to make further studies in the languages of these peoples. If conditions proved to be favorable, he expected to go also among the Yaquis of the State of Sonora, in Mexico.

George William Brown, formerly Dean of the Faculty of the College of Missions, Indianapolis, has gone to the Kennedy School of Missions at Hartford, Conn., as Professor of Indology.

George T. Flom, Professor of the Scandinavian Languages and Literatures at the University of Illinois, has become one of the Managing Editors of *The Journal of English and Germanic Philology*.

George V. Bobrinskoy, Instructor in Classics at Yale University, will go to the University of Chicago as Instructor in Sanskrit, taking up his duties in the summer quarter of 1928.

Boyd Ross Ewing Jr., until recently a graduate student at Princeton University, is now Instructor in Romance Languages, Washington and Lee University, Lexington, Virginia.

Roland G. Kent, Professor of Comparative Philology at the University of Pennsylvania, has, by the payment of the statutory sum into the treasury, become a Life Member of the Linguistic Society.

During the last three months of 1927, the following were received into membership in the Linguistic Society; their titles and addresses are in the list of members for 1927 published in this issue: Wm. H. Allen, Paul R. Hays, Watson Kirkconnell, James A. Kleist, Philip S. Miller. The following have been received as members for 1928:

Prof. David S. Blondheim, Johns Hopkins University, Baltimore, Md.
(Romance Philology)

Prof. W. Leopold, Northwestern University, Evanston, Ill. (German)

- Mr. Edward Y. Lindsay, Lehigh University, Bethlehem, Penna.
(Latin)
- Prof. John A. Sawhill, State Teachers College, Harrisonburg, Va.
(Latin)
- Mr. George K. Strodach, 6906 Henley St., Mt. Airy, Philadelphia, Pa.
(Classics)
- Prof. Blanche Colton Williams, Hunter College, New York City.
(English)
- Mr. Frederic T. Wood, Graduate College, Princeton, N. J. (Comp.
Phil.)

PROCEEDINGS
OF THE
LINGUISTIC SOCIETY OF AMERICA
AT THE FOURTH ANNUAL MEETING
CINCINNATI, DECEMBER 27-28, 1927
AND
NASHVILLE, DECEMBER 30, 1927

The Fourth Annual Meeting of the Society was held at Cincinnati, Ohio, on Tuesday and Wednesday, December 27 and 28, 1927, conjointly with the American Philological Association, the Archaeological Institute of America, the College Art Association of America, the National Association of Teachers of Speech, and the American Association of University Professors; the University of Cincinnati and the Cincinnati Chamber of Commerce were the hosts of the meeting. The headquarters of the meeting were in the Hotel Gibson, Fourth and Walnut Streets.

A single session was held also at Nashville on the afternoon of December 30, in connection with the meeting of the American Association for the Advancement of Science.

Record was secured of the attendance of the following members of the Society, at the sessions in Cincinnati:

B. M. Allen, L. Allen, H. Almstedt.
L. C. Barret, Miss S. F. Barrows, S. E. Bassett, Miss M. J. Bentley, L. Bloomfield,
G. M. Bolling, C. D. Buck.
H. Caplan, J. M. Clapp, Miss C. C. Coulter, E. Cross.
G. T. Flom, C. C. Fries.
Miss E. A. Hahn.
Mrs. E. Knott, T. A. Knott, H. Kurath.
R. Levy, C. M. Lotspeich, C. G. Lowe, W. F. Luebke.
R. V. D. Magoffin, T. Michelson, C. W. E. Miller, S. Moore.
M. B. Ogle.
W. Petersen, Miss L. Pound, F. R. Preveden, L. M. Prindle, E. Prokosch.
A. W. Read.
R. E. Saleski, E. Sapir, E. H. Sehrt, W. T. Semple, E. H. Sturtevant.
R. H. Tanner.

[41]

The First Session was held in Room 1002 of the Hotel Gibson, on the afternoon of Tuesday, December 27. President Buck called the meeting to order at 2.30 p.m., and in the absence of the Secretary, appointed Professor E. H. Sturtevant Secretary pro tempore. About 35 persons were present at the session.

By motion, the reading of the minutes was dispensed with, as the minutes of the previous meeting had already been printed in *LANGUAGE* 3.30-42.

For the Local Committee (W. T. Semple, Chairman; C. W. Blegen, Miss Hilda Bittenwieser, R. K. Hack, Miss Elizabeth Kellogg, A. K. Laing, C. M. Lotspeich), Professor Lotspeich presented briefly the arrangements which had been made for the meeting: that the University of Cincinnati would entertain the delegates at luncheon on Wednesday; that Mr. and Mrs. Charles Phelps Taft would receive the delegates at their home on Wednesday and Friday afternoon, to view their art collections and partake of hospitality, and also invited the delegates to a concert on the piano, by Mme. Marguerite Liszniewska, on Friday evening, at the Hotel Gibson, after the joint banquet of the societies; and other matters pertaining to the joint sessions and the banquets of the societies.

The Secretary pro tempore presented the report of the Secretary, Prof. R. G. Kent, as follows, and the report was ordered to be received and filed.

The work of the Secretary's office has been continued along the lines of previous years.

The membership shows some increase. For the year 1926, there were 356 members, of whom 4 died during the year, and 2 (I. G. Dobseavage, G. Van Loan) removed without leaving their addresses; 18 others (A. J. Armstrong, L. D. Bailiff, L. M. Brown, A. H. Bushee, W. R. Davis, J. L. Gerig, T. P. Haviland, L. Jung, R. M. Littlejohn, E. W. Madeira, E. L. McCreery, F. W. Nightingale, F. O. Reed, L. L. Rockwell, T. T. Stenberg, W. R. F. Stier, E. B. Twitmyer, J. Zimmermann) presented their resignations, effective at the end of 1926. The net membership with which the Society started 1927 was therefore 332; the new members of 1927 are 49 in number, giving a total of 381. Of these, however, we must regretfully record the death of 3: O. F. Emerson on March 13, B. I. Wheeler on May 2, and Miss E. M. Grice on December 4; biographical sketches of these are to be found in the *Notes and Personalities* of *LANGUAGE*. It is a matter of regret that the apparent increase over the membership of 1926 is made up largely of 18 members who have not paid the dues of 1926 and 1927, and will accordingly, under the final clause of Article II, Section 3 of the Constitution, be dropped from the rolls on December 31 of the present year.

Three members have become Benefactors: Mrs. R. M. Littlejohn, Miss C. T.

Littlejohn, Mr. A. M. Huntington; and two have become Life Members: G. M. Bolling, R. G. Kent. It is desirable that there be additions to these classes of membership.

The Library subscriptions have increased from 63 to 78, by the addition of 16 new subscriptions and the cancellation of 1.

The exchanges and copies for review have increased from 42 to 49.

The liberal policy of the Society toward foreign scholars has been continued, and with a few additions made during the year the list of those receiving complimentary copies in 1927 amounted to 129; of these, two have died: E. Courbaud, V. Thomsen.

Finally, the Secretary wishes to call attention to the general development of the activities of the Society: in addition to the publications already begun, it has started a series of Language Dissertations; as member of the American Council of Learned Societies, the Society participates in the promotion of plans for the survey of American Indian languages, and for publication of studies in the same field; through affiliation with the American Association for the Advancement of Science, the Society undertakes the holding of a session at the meetings of that Association; it is participating in the proposed Bureau of Language Research; and finally, through its members, the establishment of a Linguistic Institute comes to the fore, to be considered at this meeting. Other projects are likely to be proposed before long. The question naturally arises, whether the Society may not properly and hopefully seek a subvention, annual or otherwise, from a foundation established for the promotion of intellectual activities and scientific research.

The Secretary pro tempore presented the report of the Treasurer, Prof. R. G. Kent, as follows, which was ordered received and filed, pending the report of the Auditors:

Linguistic Society of America

Treasurer's Report, Dec. 25, 1926 to Dec. 25, 1927

Balance from previous year.....		\$1371.86
Receipts:		
Dues for 1926 (11) and 1927 (316).....	\$1635.95	
Library subscriptions for 1926 (\$22) and 1927.....	382.59	
Fees of 3 Benefactors and 2 Life Members.....	935.00	
Advance dues, 6 members, 5 libraries.....	55.00	
Sale of back sets and single publications.....	167.50	
Reprints, mailing lists, binding.....	23.40	
Interest on bank balance, Dec. 1, 1926 to Nov. 30, 1927....	24.61	
Interest on Endowment, to Aug. 1, 1927.....	25.00	
Subvention to Monograph No. 2 (all).....	117.00	
Subvention to Monograph No. 3 (partial).....	150.00	
Subvention to Dissertation No. 1 (partial).....	35.00	3551.05
Re-transfer from Trustees of Endowment.....		185.00
Total Receipts.....		\$5107.91

Disbursements:

Balance of Secretary's expenses to Cambridge, 1926....	6.65	
Secretary's expenses to Princeton, on A.C.L.S. business..	3.32	
Secretary pro tem's expenses to Cincinnati (partial)....	6.76	
Editor's expenses to Dec. 31, 1926.....	25.00	
Office expenses: postage, stationery, printing, address- ing, telegraph, telephone, express, binding, etc.....	221.55	
Circulars and notices for Fourth Meeting.....	56.58	
Dues of 1926, American Council of Learned Societies...	25.00	
Advertising.....	10.00	
Language Monograph No. 2, gross cost.....	214.22	
Language Monograph No. 3, gross cost.....	367.47	
Language: envelopes, cash disbursements, special types.....	45.17	
Language II. 4 and table of contents.....	294.47	
Language III. 1.....	324.58	
Language III. 2.....	499.65	
Language III. 3.....	290.17	2390.59
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Paid to Trustees: Fees of 3 Benefactors.....	\$750.00	
Fees of 2 Life Members.....	185.00	
Accrued interest.....	1.11	
Current Funds.....	250.00	1186.11
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Deposited in the West Philadelphia Title and Trust Co., 36th and Walnut Sts., Savings Fund.....	500.00	
Balance on deposit in the First National Bank of Philadel- phia, 32d and Market Sts.....	1031.21	1531.21
<hr/>		
		\$5107.91

Schedule of Assets and Liabilities, to Dec. 31, 1927

Assets:

Cash in checkable account, First Nat. Bk. of Phila.....	\$1031.21	
Cash in Savings Fund of W. Phila. Title and Trust Co....	500.00	
Current funds in Endowment Fund.....	65.00	
Accrued interest on preceding items, to Dec. 31, 1927....	60.00	
Recoverable arrears of dues and subscriptions, and un- paid orders for publications.....	83.00	
Subvention to Monograph No. 3, balance due.....	52.05	
Subvention to Dissertation No. 1, balance due.....	50.00	\$1841.26
<hr/>		
Liabilities (estimated):		
Balance of Secretary's expenses to Cincinnati, 1927....	55.00	
Editor's allowance, 1927.....	25.00	
Allowance for traveling, to Chairman at Nashville....	15.00	
Dues and subscriptions paid in advance.....	60.00	
Language III. 4 and table of contents.....	350.00	
Dissertation No. 1, gross cost.....	105.00	\$610.00
<hr/>		
Estimated Net Balance, in addition to \$935 of Endowment.....		1231.26
Actual Net Balance, Dec. 31, 1926.....		775.55

The report of the Trustees of the Endowment Fund is appended to this report:

The Trustees of the Endowment Fund acknowledge receipt from the Treasurer of the Society, on February 8, 1927, of One Thousand Dollars, being \$750 of Benefactors' Fees (Mrs. R. M. Littlejohn, Miss C. T. Littlejohn, Mr. A. M. Huntington) and \$250 of current funds. They invested this sum in one One Thousand Dollar Five Percent Net Guaranteed Mortgage Certificate of the West Philadelphia Title and Trust Co., the certificate to be held by the said Title and Trust Co. for safe-keeping and the income remitted to the Treasurer of the Society when due, on August 1 and February 1.

The Treasurer paid also the accrued interest, amounting to \$1.11, and later transferred to the Trustees \$185 as Life Membership Fees (G. M. Bolling, R. G. Kent), upon which the Trustees transferred back to the Treasurer \$185 of the current funds in their possession.

The Endowment Fund accordingly contains \$935 of endowment and \$65 of current funds, invested as stated. The Treasurer acknowledges the receipt of the interest due on August 1, 1927.

(signed) ARTHUR R. SPENCER
F. CORLIES MORGAN
ROLAND G. KENT
Trustees

Dec. 23, 1927

On behalf of the Executive Committee, the Secretary pro tempore presented the following report:

Pursuant upon the action taken at the last meeting of the Society, the President appointed a Committee of three to arrange a session at Nashville, in connection with the meeting of the American Association for the Advancement of Science. The Committee consists of Prof. W. A. Oldfather, Chairman; Prof. G. M. Bolling; Prof. Edward Sapir. Professor Bolling will act as chairman of the Nashville session, and Professor Sapir will be the delegate of the Society to the Council of the Association.

The Linguistic Society of America was elected to membership in the American Council of Learned Societies on January 29, 1927. The President of the Society has appointed E. H. Sturtevant to serve as representative on the Council for the term 1927-1930, and Leonard Bloomfield for the term 1927-1928, term of service thereafter being four years. No meeting of the Council has been held since their appointment. But the Secretary of the Society has coöperated with a Committee of the Council in securing the release of manuscripts on American Indian Languages, for eventual publication with a subvention.

L. H. Gray was appointed delegate to the directorate of the proposed Bureau of Language Research. He has attended meetings of the board, and reports progress.

According to the provisions of Article II, Section 11 of the Constitution, the Executive Committee appointed as trustees of the Endowment Fund F. Corlies Morgan, Treasurer of the University of Pennsylvania, and Arthur R. Spencer, Assistant to the Dean of the College of the University of Pennsylvania, together with the Treasurer of the Society, acting ex-officio.

The *Bulletin on Language Dissertations* is in preparation by the Secretary, but has not yet been brought into form ready to print. The series of *Language Dissertations* has however been started by the Committee on Publications.

During the year, the Executive Committee, acting by correspondence, has fixed the time and place of the present meeting, and made other necessary arrangements; it has also elected to membership the several lists of nominees for membership, published in *LANGUAGE* as elected in 1927.

The Executive Committee met on Tuesday, December 27, 1927, at 10.00 A.M., at the Hotel Gibson in Cincinnati, with the attendance also, by invitation, of the Committee on Publications, the Society's members of the Local Committee, and the proposers of the Linguistic Institute. There were present accordingly C. D. Buck, E. H. Sturtevant, E. Sapir, L. Bloomfield, E. Prokosch, G. M. Bolling, S. Moore, C. M. Lotspeich, R. E. Saleski.

The reports of the Secretary, of the Treasurer, and of the Editor were presented informally and their contents considered.

The Executive Committee appointed Prof. Leonard Bloomfield to succeed himself, as delegate of the Society to the American Council of Learned Societies for the term 1929-1932.

The Committee wishes to recommend the following actions:

(1) That in accord with Article II, Section 6 of the Constitution, the following scholars be elected to Honorary Membership:

Dr. Eduard Sievers, Professor Emeritus of Germanic Philology at the University of Leipzig.

Dr. Ferdinand Sommer, Professor of Indo-European Comparative Philology at the University of Bonn.

Dr. Wilhelm Meyer-Lübke, Professor of Romance Philology at the University of Bonn.

(2) That the President and the Secretary of the Society be empowered to appoint and sign credentials of members of the Society as its delegates to the First International Congress of Linguists, at the Hague, April 10-15; to the Primo Congresso Internazionale Etrusco at Florence and Bologna, April 27 to May 3, 1928; and to the Seventeenth International Congress of Orientalists at Oxford, August 27 to September 1, 1928.

(3) That the Society reaffirm its stand in regard to proposed restrictions on the importation of foreign books, taken at its meeting of December 27, 1926.

(4) That the Society appoint a Committee to request educational foundations for a subvention of Ten Thousand Dollars towards the publication of the following works: (a) Manuscript material collected by the Committee on American Indian Linguistic Research; (b) *Livonian Grammar and Dictionary*, in course of preparation by O. Loozits.

The Executive Committee will later present a recommendation with regard to the proposed Linguistic Institute.

On motion, properly seconded, the nominees for Honorary Membership received the unanimous vote of those present, and were declared duly elected.

On motion, properly seconded, the remaining recommendations of the Executive Committee and its ad interim actions, as reported, were approved by the Society.

The President thereupon appointed Prof. E. C. Armstrong and Prof. Leonard Bloomfield as the Committee to request educational foundations for a subvention.

Prof. G. M. Bolling, Editor of the Publications of the Society and Chairman of the Committee on Publications, presented the following report, which was on motion adopted:

During the year 1927, the Society has through its Committee on Publications published the third volume of *LANGUAGE*, amounting to 279 pages, and has in press the first number of the series of *LANGUAGE DISSERTATIONS*, amounting to 25 pages. Its title is:

The Vedic Declension of the Type vr̥kī's, by Ruth Norton Albright, Ph.D. of The Johns Hopkins University.

The *LANGUAGE MONOGRAPHS* Nos. 2 and 3 have appeared during 1927, and have been distributed to the members and subscribers for 1926, for which year they were announced.

Several *MONOGRAPHS* and *DISSERTATIONS* are under consideration for appearance in the series.

The Executive Committee proposed the following minute, which, after discussion, was adopted:

The Linguistic Society of America hereby approves the project of a Linguistic Institute, to be held at New Haven in the summer of 1928, along the lines proposed by R. E. Saleski and E. H. Sturtevant, and authorizes the holding of it, under the administration of the following committee: E. H. Sturtevant, who is hereby appointed Director of the Linguistic Institute; R. E. Saleski, who is appointed Assistant Director; and R. G. Kent.

The Society gives to the said Committee of Administration full powers to modify their plans and to cancel them in part or in whole, if the support which they secure for the Institute seems in their judgment insufficient.

The Society empowers the Executive Committee to authorize a continuance of the Linguistic Institute in 1929, if this be recommended by the Committee of Administration, with or without a change in the membership of the Committee of Administration.

Provided always, that the Linguistic Society incur no financial obligations therein.

The Presiding Officer now appointed the following committees:

On Nomination of Officers for 1928: W. A. Oldfather, Chairman; C. M. Lotspeich, E. Prokosch.

To Audit the Accounts of the Treasurer: E. Prokosch, Chairman; E. H. Sturtevant.

On Resolutions: G. T. Flom, Chairman; E. Sapir.

The reading of papers was now begun:

Prof. Samuel Moore, of the University of Michigan: *The Earliest Morphological Changes in Modern English*. Discussion by Messrs. Sapir, Saleski.

Prof. George T. Flom, of the University of Illinois: *On Primitive North Germanic w and spirantic b in the later Old Norse runic inscriptions and in the earliest literary documents*. Discussion by Messrs. Prokosch, Sapir, Lotspeich.

Prof. Edgar H. Sturtevant, of Yale University: *Initial sp and st in Hittite*. Discussion by Messrs. Sapir, Michelson, Bolling.

Prof. Louis Allen, of the University of Toronto: *A Note on Two Iroquoian Numerals*. Discussion by Messrs. Sapir, Michelson.

Prof. George M. Bolling, of the Ohio State University: *The Alleged Equivalence in Meaning of παραιῖσθαι and ἀθερεῖν*.

Prof. Truman Michelson, of the Smithsonian Institution and George Washington University: *Walleser on the Home of Pali*.

Prof. Sarah T. Barrows, of the State University of Iowa: *A Frequently Occurring Usage of Pronunciation in Iowa*. Discussion by Messrs. Sturtevant, Bloomfield, Prokosch, Flom, Miss Hahn, Messrs. Knott, Clapp, Sapir, Kurath, L. Allen, Hamilton.

Prof. Hermann Collitz, of the Johns Hopkins University: *Positive and Negative Phonetic Laws*. (Read by title only.)

Miss Maria W. Smith, of Philadelphia: *The Instrumental in the Gathas of the Avesta*. (Read by title only.)

Mr. Waldemar Jochelson, of the American Museum of Natural History in New York: (a) *The Phonology in the Aleut Language*; (b) *The Noun and Verb Modifications in the Kamchadal Language*; (c) *The Negative Forms in the Yukaghir Language*. (Read by title only.)

Adjournment was taken at 5.20 p.m.

An informal subscription dinner was held at 6.30 p.m., at the Hotel Gibson, with an attendance of 27 persons, of whom 23 were members of the Society.

The Second Session was held on Tuesday evening, in Room 1002 of the Hotel Gibson. President Buck called the meeting to order at 8.25 P.M. About 34 persons were present. The reading of papers was at once begun:

- Prof. Carl Darling Buck, of the University of Chicago, President of the Society: *A Project for a Dictionary of Selected Synonyms in the Principal Indo-European Languages: a contribution to the history of ideas.* Discussion by Messrs. Prokosch, Sapir, Prindle, Tanner, Sturtevant.
- Prof. Claude M. Lotzpeich, of the University of Cincinnati: *Sound Symbolism.* Discussion by Messrs. Prokosch, Kurath, Sturtevant, Sapir, Fries, Moore, Knott, Miss Hahn.
- Prof. Edward Sapir, of the University of Chicago: *Fundamental Traits in the Structure of Grebo, a Soudanese Language.* Discussion by Messrs. Lotzpeich, Sturtevant, Bolling, Hamilton.
- Prof. Leonard Bloomfield, of the University of Chicago: *The Pathology of Words.* Discussion by Messrs. Prokosch, Moore, Bolling, Lotzpeich, Sturtevant, Sapir, Potter, Buck, Preveden, B. M. Allen, Luebke.

Adjournment was taken at 11.15 p.m.

The Third Session was held on the morning of Wednesday, December 28, at the University of Cincinnati, in Room 11 of McMicken Hall. President Buck called the meeting to order at 9.35 A.M. About 25 persons were in attendance. The reading was at once begun:

- Dr. Francis R. Preveden, of DePaul University and the University of Chicago: *The Turkish Loanwords in Serbo-Croatian and Bulgarian.*
- Mr. Ephraim Cross, of New York City: *The Italic Accent, especially the Latin.* Discussion by Messrs. Sturtevant, Buck, Petersen, Sapir, Miss Hahn.
- Prof. E. Adelaide Hahn, of Hunter College: *On Confusion of Terms for Mind and Terms for Body in Vergil.* Discussion by Mr. Sturtevant.
- Prof. Walter Petersen, of the University of Florida: *The Growth of the Greek κ -Perfect.* Discussion by Messrs. Buck, Bolling, Sapir, Cross.
- Mr. Bernard M. Allen, of the Roxbury School, Cheshire, Conn.: *The Ablative of Respect.* Discussion by Messrs. Buck, Sapir.
- Prof. Robert J. Kellogg, of Ottawa University, Ottawa, Kansas: *Verb-Stem Formations in Hittite and in Indo-European.* (Read by title only.)

A brief business session followed.

Prof. Lotspeich, for the Committee on Nominations, presented the following report, which, in the absence of nominations from the floor, was adopted in the usual manner, and the nominees were declared elected:

President, Prof. Franz Boas, of Columbia University.

Vice-President, Prof. G. O. Curme, of Northwestern University.

Secretary and Treasurer, Prof. Roland G. Kent, of the University of Pennsylvania.

Executive Committee, the preceding, and

Prof. Leonard Bloomfield, of the University of Chicago.

Prof. Franklin Edgerton, of Yale University.

Prof. Edward Prokosch, of Bryn Mawr College.

Committee on Publications:

Chairman and Editor: Prof. George Melville Bolling, of the Ohio State University.

To serve through 1930: Prof. Hans Kurath, of the Ohio State University.

Prof. Sturtevant, for the Auditors, reported that they had examined the accounts of the Treasurer and found them correct; whereupon on motion the report of the Treasurer was approved.

Prof. Flom, for the Committee on Resolutions, presented the following report, which was on motion adopted:

The Linguistic Society of America wishes to express its thanks for the welcome accorded it, and its hearty appreciation of the splendid hospitality that has been shown it, during this its Fourth Annual Meeting, by the University of Cincinnati; the Cincinnati Chamber of Commerce; the management of the Hotel Gibson; the Local Committee on Arrangements, and its special representatives, Professor W. T. Semple and Professor C. M. Lotspeich; and by Mr. and Mrs. Charles Phelps Taft.

Adjournment was taken at 11.50 A.M.

The members of the Society were guests of the University of Cincinnati in Women's Hall, at luncheon on Wednesday, December 28.

The Fourth Session was held on Wednesday afternoon, December 28, in the Ball Room of the Hotel Gibson, jointly with the American Philological Association. Prof. F. C. Babbitt, President of the American Philological Association, called the meeting to order at 2.30 P.M. About 150 persons were in attendance. The following papers were presented:

Prof. Harry J. Leon, of the University of Texas: *The Language of the Inscriptions from the Jewish Catacombs of Rome.*

Prof. Edgar H. Sturtevant, of Yale University: *A Hittite Tablet in the Babylonian Collection at Yale*. Discussion by Messrs. Buck, Cross.
 Prof. George Melville Bolling, of the Ohio State University: *Homeric Notes*.

Prof. Lily Ross Taylor, of Bryn Mawr College: *Divus Julius*.

Prof. Samuel E. Bassett, of the University of Vermont: "*Through a Glass Darkly*," *I Corinthians 13.12*.

Prof. Roland G. Kent, of the University of Pennsylvania: *Lachmann's Law of Vowel Lengthening*. (Read by title only.)

Adjournment was taken at 4.05 P.M.

The Fifth Session was held on the evening of Wednesday, December 28, at the Hotel Gibson, jointly with the Archaeological Institute of America, the American Philological Association, and the College Art Association of America. Prof. Ralph Van Deman Magoffin of New York University, President of the Archaeological Institute, presided over the meeting, and Professor Frank Cole Babbitt of Trinity College (Hartford), President of the Philological Association, delivered the annual address, on *The Epic of America*.

The Annual Subscription Dinner of the associated societies was held at the Hotel Gibson, on Thursday evening, December 29, at seven o'clock. Dean L. T. More of the University of Cincinnati acted as Toastmaster, and President Frederick Charles Hicks of the University of Cincinnati delivered an address of welcome to the visiting societies, to which Professor Edward Capps of Princeton University responded. Other speakers were Mr. French, of Procter and Gamble, Cincinnati; Professor S. E. Bassett, of the University of Vermont, representing the Linguistic Society; Professor John Garstang, of the University of Liverpool; Professor G. J. Laing, of the University of Chicago.

Members of the Linguistic Society were welcomed also at the annual banquet of the American Association of University Professors, held at the Hotel Gibson on Friday evening, December 30, at seven o'clock. At this dinner, Professor W. T. Semple, retiring President of the Association, delivered the annual address.

(signed) EDGAR HOWARD STURTEVANT,
Secretary pro tempore.

THE NASHVILLE SESSION

The Sixth Session of the Meeting of 1927 was held on Friday afternoon, December 30, in Room 31 of the Scarritt College for Christian Workers, Nashville, Tennessee, in connection with the annual convention of the American Association for the Advancement of Science. The Committee of the Linguistic Society in charge of the Session consisted of W. A. Oldfather, Chairman; G. M. Bolling; Edward Sapir. Professor Bolling called the meeting to order at 2.30 P.M. The reading of papers was at once begun:

Prof. Leonard Bloomfield, of the University of Chicago: *A Reconstruction Confirmed*. Discussion by Messrs. Michelson, Sapir, Bolling.

Prof. George Melville Bolling, of the Ohio State University: *Phonetic Laws Admit of No 'Exceptions'*. Discussion by Messrs. Michelson, Petersen, Sapir, Bloomfield.

Prof. Truman Michelson, of the Smithsonian Institute and George Washington University: *Some Algonquian Notes*. Discussion by Messrs. Sapir, Michelson.

Prof. Robert J. Kellogg, of Ottawa University, Ottawa, Kansas: *Thematic Ablaut and Subjunctive Origins*. (Read by title only.)

Prof. Walter Petersen, of the University of Florida: *The Latin vi-Perfect*. Discussion by Messrs. Sapir, Bolling, Michelson.

Prof. Edward Sapir, of the University of Chicago: *Experiments in Sound Symbolism*. Discussion by Messrs. Bolling, Michelson, Preveden, Petersen, Bloomfield.

Dr. Francis R. Preveden, of DePaul University and the University of Chicago: *American Loanwords in Hungarian*. Discussion by Messrs. Bloomfield, Sapir.

Adjournment was taken at 5.50 P.M.

(Signed) GEORGE MELVILLE BOLLING,
Chairman of the Nashville Session.

LIST OF MEMBERS, 1927

This list includes all those who were on the rolls of the Society in 1927. SC before the name indicates Signers of the Call which led to the foundation of the Society, FM indicates Foundation Members, a date indicates the year of election. So far as the information is at hand, the special subject of instruction or of study, or the occupation, is given. Any changes of address or of title, and any errors, should be at once reported to the Secretary of the Society. Later lists will give the names of those who become members during 1928.

ASSOCIATED SOCIETIES

Indogermanische Gesellschaft, bei Prof. Dr. A. Debrunner,
Landgrafenstieg 5, Jena, Germany.
Société de Linguistique de Paris, à la Sorbonne, Paris V, France.

HONORARY MEMBERS

- 1927 Prof. Dr. A. Debrunner, Landgrafenstieg 5, Jena, Germany.
1927 Prof. Dr. Otto Jespersen, Ermelundsly, Gentofte, Copenhagen,
Denmark.
1927 Prof. A. Meillet, 24 Rue de Verneuil, Paris VII, France.
1927 Dr. P. Rivet, 61 Rue de Buffon, Paris, France.
1927 Prof. Dr. Jakob Wackernagel, Basel, Switzerland.
1927 Prof. Henry Cecil Wyld, Merton College, Oxford, England.

ACTIVE MEMBERS

- FM Prof. Arthur Adams, Trinity Col., Hartford, Conn. (English)
FM Mr. Otto E. Albrecht, Univ. of Pennsylvania, Philadelphia,
Pa. (Romanic Langs.)
1927 Mrs. Ruth Norton Albright (Mrs. W. F.), Box 333, Jerusalem,
Palestine. (Indology)
FM Prof. Joseph E. A. Alexis, 1420 Garfield St., Lincoln, Neb.
(Romance Langs., Univ. of Nebraska)
1926 Mr. Bernard M. Allen, Cheshire, Conn. (Latin, Roxbury
School)
1926 Prof. Louis Allen, Univ. of Toronto, Toronto, Canada. (French)

- 1927 Mr. Wm. H. Allen, 3345 Woodland Av., Philadelphia, Pa.
(Bookseller)
- FM Prof. Hermann Almstedt, Univ. of Missouri, Columbia, Mo.
(Germanic Langs.)
- 1926 Mr. Manuel J. Andrade, DeWitt Clinton High School, New
York City. (Spanish)
- 1925 Prof. A. LeRoy Andrews, Cornell Univ., Ithaca, N. Y. (German)
- FM Prof. Claude E. Anibal, Ohio State Univ., Columbus, Ohio.
(Spanish)
- 1925 Prof. Edward C. Armstrong, 26 Edgehill St., Princeton, N. J.
(French, Princeton Univ.)
- FM Prof. Herbert D. Austin, Univ. of Southern California, Univer-
sity Av., Los Angeles, Calif. (Italian and French)
- FM Prof. Harry Morgan Ayres, Columbia Univ., New York City.
(English)
- FM Prof. Earle B. Babcock, American University Union, 173 Boule-
vard St.-Germain, Paris, France. (Romance Langs.)
- 1925 Mrs. Florence Brachman Barasch (Mrs. Joseph B.), 8439 Ger-
mantown Av., Philadelphia, Pa.
- 1925 Prof. James L. Barker, Univ. of Utah, Salt Lake City, Utah.
(Modern Langs.)
- FM Prof. A. J. Barnouw, Columbia Univ., New York City. (Dutch
Hist., Lang., and Lit.)
- SC Prof. LeRoy Carr Barret, Trinity Col., Hartford, Conn. (Latin)
- FM Prof. Sarah T. Barrows, Univ. of Iowa, Iowa City, Iowa. (Pho-
netics)
- 1927 Mr. Phillips Barry, 5 Craigie Circle, Cambridge, Mass. (Classics)
- FM Prof. George A. Barton, Univ. of Pennsylvania, Philadelphia,
Pa. (Semitic Langs.)
- 1927 Prof. Samuel Eliot Bassett, 295 S. Prospect St., Burlington, Vt.
(Greek Lang. and Lit., Univ. of Vermont)
- 1926 Dr. Claudio Basto, Viana do Castelo, Portugal.
- FM Prof. William N. Bates, 220 St. Mark's Sq., Philadelphia, Pa.
(Greek, Univ. of Pennsylvania)
- 1927 Mr. Charles F. Bauer, 3440 Chestnut St., Philadelphia, Pa.
(History, Camden Junior High School)
- FM Prof. Jean-B. Beck, Univ. of Pennsylvania, Philadelphia, Pa.
(Romanic Langs.)
- FM Prof. Gertrude H. Beggs, Univ. of Richmond, Richmond, Va.
(Latin)

- FM Dean H. M. Belden, 811 Virginia Av., Columbia, Mo. (English, Univ. of Missouri)
- SC Prof. Harold H. Bender, 120 Fitz Randolph Road, Princeton, N. J. (Indo-Germanic Phil., Princeton Univ.)
- 1927 Prof. Adolph B. Benson, 548 Orange St., New Haven, Conn. (German and Scandinavian, Yale Univ.)
- FM Miss M. Julia Bentley, 3517 Middleton Av., Clifton, Cincinnati, Ohio. (Latin, Hughes High School)
- FM Mr. Morris Berg, 92 S. 13th St., Newark, N. J. (Romance Langs.)
- FM Prof. Frank R. Blake, 1600 Park Av., Baltimore, Md. (Oriental Langs., Johns Hopkins Univ.; Principal, Baltimore City Col.)
- SC Prof. Leonard Bloomfield, Univ. of Chicago, Chicago, Ill. (Germanic Phil.)
- SC Prof. Emeritus Maurice Bloomfield, Johns Hopkins Univ., Baltimore, Md. (Sanskrit and Comparative Phil.)
- SC Prof. Franz Boas, Columbia Univ., New York City. (Anthropology)
- FM Mr. George Bobrinskoy, Yale University, New Haven, Conn. (Classics)
- SC Prof. George Melville Bolling, Ohio State Univ., Columbus, Ohio. (Greek) Life Member, 1927.
- FM Prof. Louise M. Bourgoïn, 20 Belmont Av., Northampton, Mass. (French, Smith Col.)
- FM Prof. Ray P. Bowen, Univ. of Oregon, Eugene, Ore. (Romance Langs.)
- 1926 Prof. J. L. Boysen, Box 1510, Univ. Sta., Austin, Texas. (Germanic Langs., Univ. of Texas)
- FM Mrs. Beatrice Allard Brooks, 9 State St., Wellesley, Mass.
- FM Prof. George H. Brown, Worcester Polytechnic Institute, Worcester, Mass. (Modern Langs.)
- FM Prof. George Wm. Brown, 91 Evergreen Av., Hartford, Conn. (Indology, Kennedy School of Missions)
- FM Prof. W. Norman Brown, Univ. of Pennsylvania, Philadelphia, Pa. (Sanskrit)
- 1925 Prof. W. F. Bryan, 1907 Orrington Av., Evanston, Ill. (English, Northwestern Univ.)
- SC Prof. Carl D. Buck, Univ. of Chicago, Chicago, Ill. (Comparative Phil.)

- 1926 Dr. Ludlow S. Bull, Metropolitan Museum, New York City
(Egyptology, Metropolitan Museum and Yale Univ.)
- FM Dean Robert B. Burke, Univ. of Pennsylvania, Philadelphia, Pa.
(Latin)
- FM Prof. A. U. N. Camera, 575 Dahill Road, Brooklyn, N. Y.
(Romance Langs., Col. of City of New York)
- 1927 Prof. Harry Caplan, Cornell Univ., Ithaca, N. Y. (Classics)
- 1925 Prof. Frederick M. Carey, 855 N. Vermont Av., Los Angeles,
Calif. (Greek and Latin, Univ. of Calif., Southern Branch)
- 1927 Prof. Jane Gray Carter, 175 Riverside Drive, New York City.
(Classics, Hunter Col.)
- 1926 Dr. F. S. Cawley, 65 Fresh Pond Parkway, Cambridge, Mass.
(German, Harvard Univ.)
- FM Juan C. Cebrian, Esq., Jorge Juan 6, Madrid, Spain. (Spanish)
- 1926 Mr. Victor Chankin, Seward Park High School, Essex St.,
New York City. (Modern Langs.)
- FM Dean George Davis Chase, Univ. of Maine, Orono, Me. (Latin)
- FM Dr. Edith Frances Clafin, 17 Felton Hall, Cambridge, Mass.
(Greek and Latin, Rosemary Hall, Greenwich, Conn.)
- 1926 Mr. John M. Clapp, 15 E. 26th St., New York City. (Publisher)
- 1925 Prof. Letta M. Clark, 1501 L St., Lincoln, Neb. (Technique
of Instruction in English, Univ. of Neb.)
- 1925 Prof. Walter E. Clark, 37 Kirkland St., Cambridge, Mass.
(Sanskrit, Harvard Univ.)
- FM Mr. Francis P. Clarke, Univ. of Pennsylvania, Philadelphia, Pa.
(Philosophy)
- 1925 Prof. Harold L. Cleasby, 805 Comstock Av., Syracuse, N. Y.
(Classical Archaeology and Italian, Syracuse Univ.)
- FM Prof. Alfred Coester, Stanford Univ., Calif. (Romanic Langs.)
- FM Mr. George F. Cole, Univ. of Pennsylvania, Philadelphia, Pa.
(Romanic Langs.)
- SC Prof. Emeritus Hermann Collitz, 1027 N. Calvert St., Baltimore,
Md. (Germanic Phil., Johns Hopkins Univ.)
- 1927 Mrs. Klara H. Collitz (Mrs. Hermann), 1027 N. Calvert St.,
Baltimore, Md. (Germanic Philology)
- FM Rev. George S. Cooke, The Wissahickon Inn, Redlands, Calif.
- FM Prof. Douglas H. Corley, 2005 Belle Court Av., Nashville, Tenn.
(Old Testament Lit. and Comparative Religions, Vanderbilt
Univ.)

- FM Prof. Roberta D. Cornelius, Randolph-Macon Woman's Col.,
Lynchburg, Va. (English)
- 1927 Prof. Cornelia C. Coulter, Mount Holyoke Col., South Hadley,
Mass. (Latin)
- 1927 Prof. R. W. Cowden, 1016 Olivia St., Ann Arbor, Mich. (Rhetoric,
Univ. of Michigan)
- FM Prof. Hardin Craig, Univ. of Iowa, Iowa City, Iowa. (English)
- 1926 Prof. W. A. Craigie, Univ. of Chicago, Chicago, Ill. (English)
- FM Prof. J. P. Wickersham Crawford, Univ. of Pennsylvania, Philadelphia,
Pa. (Romanic Langs. and Lits.)
- 1926 Prof. E. D. Cressman, 2076 S. St. Paul St., Denver, Colo.
(Classics, Univ. of Denver)
- 1927 Mr. Ephraim Cross, 1299 Franklin Ave., Bronx, New York City.
(Linguistic Science)
- FM Prof. Thomas F. Cummings, D. D., Biblical Seminary, 541
Lexington Av., New York City. (Phonetics and Linguistics)
- 1926 Prof. G. O. Curme, Lunt Library, Evanston, Ill. (Germanic
Phil., Northwestern Univ.)
- 1925 Prof. George H. Danton, Tsing Hua Col., Peking, China.
(German)
- 1927 Mr. D. Sutherland Davidson, Univ. of Pennsylvania, Philadelphia,
Pa. (Anthropology)
- FM Jaime de Angulo, Esq., 2815 Buena Vista Way, Berkeley, Calif.
(American Linguistics)
- FM Prof. Victor de Beaumont, 73 Queen's Park, Toronto, Canada.
(French, Univ. of Toronto)
- FM Prof. Roy Joseph Deferrari, Catholic Univ., Washington, D. C.
(Latin)
- FM Godfrey Dewey, Esq., Lake Placid Club, N. Y. (Pres. and Secy.,
Simplified Spelling Board)
- FM Dean Norman W. DeWitt, Victoria College, Toronto, Canada.
(Latin)
- 1925 Rev. Frederick W. Dickinson, Nazareth Hall, Lake Johanna,
St. Paul, Minn.
- FM Prof. Roland B. Dixon, Peabody Museum, Harvard Univ.,
Cambridge, Mass. (Anthropology)
- FM Prof. Raymond P. Dougherty, 319 Willow St., New Haven,
Conn. (Assyriology, Yale Univ.)
- FM Prof. Henry Grattan Doyle, George Washington Univ., Washington,
D. C. (Romance Langs.)

- FM Prof. Douglas L. Drew, Swarthmore Col., Swarthmore Pa.
(Greek)
- FM Prof. Joseph Dunn, Catholic Univ., Washington, D. C. (Celtic
and Romance Phil.)
- 1925 Prof. C. L. Durham, Cornell Univ., Ithaca, N. Y. (Latin)
- FM Prof. Clarence W. Eastman, 18 Northampton Road, Amherst,
Mass. (German, Amherst Col.)
- 1927 Miss Helen S. Eaton, 79 Washington Place, New York City.
(Linguistic Research Assistant to the International Auxiliary
Language Association)
- SC Prof. Franklin Edgerton, 408 Whitney Av., New Haven, Conn.
(Sanskrit, Yale Univ.)
- FM Prof. Wallace S. Elden, Ohio State Univ., Columbus, Ohio
(Latin)
- 1925 Dr. Barnett A. Elzas, 42 W. 72d St., New York City. (Rabbi)
- FM Prof. Oliver Farrar Emerson, 1910 E. Wadena St., Cleveland,
Ohio. (English, Western Reserve Univ.) Died March 13,
1927.
- FM Prof. Erwin A. Esper, Univ. of Washington, Seattle, Wash.
(Psychology)
- SC Prof. Aurelio M. Espinosa, Stanford Univ., Calif. (Romanic
Langs.)
- FM Mr. B. R. Ewing, Jr., Washington and Lee Univ., Lexington,
Va. (Romance Langs.)
- 1926 Prof. Barend Faddegon, 51 Brattle St., Cambridge, Mass.
(Sanskrit, Harvard Univ.)
- 1926 Prof. Oscar F. W. Fernsemer, Hunter College, 66 Court St.,
Brooklyn, N. Y. (German)
- 1927 Prof. Edward Fitch, Hamilton College, Clinton, N. Y. (Greek)
- SC Prof. George T. Flom, 611 W. Green St., Urbana, Ill. (Scandi-
navian Langs, and Lits., Univ. of Illinois)
- FM Mr. Herbert P. Flower, 969 North Av., Reedley, Calif. (Lan-
guages, Reedley High School)
- FM Prof. E. M. Fogel, Univ. of Pennsylvania, Philadelphia, Pa.
(German)
- FM Mr. Maynard D. Follin, Box 118, Detroit, Mich.
- FM Prof. Frank H. Fowler, Univ. of Arizona, Tucson, Ariz. (Clas-
sical Langs.)
- FM Prof. Charles S. Fox, 445 High St., Bethlehem, Pa. (Romance
Langs, Lehigh Univ.)

- FM Prof. Charles C. Fries, 7 Harvard Place, Ann Arbor, Mich. (English, Univ. of Michigan)
- FM Prof. O. C. Gebert, Univ. of Wyoming, Laramie, Wyo. (Modern Langs.)
- FM Dr. Henry S. Gehman, 5720 N. 6th St., Philadelphia, Pa. (Modern Langs., S. Phila. High School)
- FM Mr. E. A. Gellot, 290 Broadway, New York City. (Artist)
- FM Mr. Auguste Genin, Rosales No. 33, Mexico City, Mex. (In Industrial Occupation)
- 1925 Mr. Richard H. Geoghegan, Fairbanks, Alaska. (Court Stenographer)
- FM Prof. D. M. Gilbert, Albion College, Albion, Mich. (Modern Langs.)
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Delaware, Ohio: Slocum Library, Ohio Wesleyan University.
Elmira, N. Y.: Library of Elmira College.
Emory University, Ga.: Library of Emory University.
Eugene, Ore.: Library of the University of Oregon.
Evanston, Ill.: Library of Northwestern University.
Grand Forks, N. D.: Library of the University of North Dakota.
Haverford, Pa.: Library of Haverford College.
Indianapolis, Ind.: Library of Butler College.
Lafayette, Ind.: Library of Purdue University.
Lawrence, Kan.: Watson Library, University of Kansas.
Los Angeles, Calif.: Library of the University of California, Southern Branch, 855 N. Vermont Av.
Los Angeles, Calif.: Library of the University of Southern California.
Madison, Wis.: Library of the University of Wisconsin.
Manila, P. I.: Library of the University of the Philippines.

- Minneapolis, Minn.: Library of the University of Minnesota.
New Haven, Conn.: Library of Yale University.
New York City: Library of the American Museum of Natural History, 77th St. and Central Park W.
New York City: Library of Columbia University.
New York City: Library of the Hispanic Society of America, 155th St. W. of Broadway. (Benefactor's Member)
New York City: New York Public Library, 476 Fifth Av.
Northampton, Mass.: Library of Smith College.
Oberlin, Ohio: Library of Oberlin College.
Philadelphia, Pa.: Library of the American Philosophical Society, 104 S. 5th St.
Philadelphia, Pa.: Library of the University of Pennsylvania.
Philadelphia Pa.: Library of Temple University, Broad and Berks Sts. (1927)
Poughkeepsie, N. Y.: Library of Vassar College.
Princeton, N. J.: Library of Princeton University.
Providence, R. I.: Library of Brown University.
Rochester, N. Y.: Library of the University of Rochester.
Seattle, Wash.: Library of the University of Washington.
Stanford University, Calif.: Library of Stanford University.
Urbana, Ill.: Library of the University of Illinois.
Washington, D. C.: Library of the Bureau of American Ethnology, Smithsonian Institute.
Australia: Melbourne: Public Library of Melbourne.
Australia: Sydney: Fisher Library, University of Sydney.
Austria: Vienna: Universitätsbibliothek.
Canada: Montreal: Library of McGill University.
Canada: Ottawa: Library of the Geological Survey.
Canada: Toronto: Library of the University of Toronto.
Czecho-Slovakia: Prague: Library of the English Seminary, University of Prague.
England: Oxford Bodleian Library.
Finland: Helsingfors: Library of the University of Finland.
France: Paris: Bibliothèque de l'Université de Paris, La Sorbonne.
France: Paris: Bibliothèque de l'Ecole Nationale des Langues Orientales Vivantes, 2 rue de Lille.
Germany: Berlin: Preussische Staats-Bibliothek.
Germany: Berlin: Universitäts-Bibliothek, Dorotheenstr. 81.
Germany: Göttingen: Universitäts-Bibliothek.

- Germany: Köln: Universitäts- und Stadtbibliothek, Gereonskloster 12.
 Germany: Leipzig: Universitäts-Bibliothek.
 Germany: Marburg: Universitäts-Bibliothek.
 Germany: München: Bayerische Staatsbibliothek, Ludwigstr. 23.
 Germany: München: Universitäts-Bibliothek.
 India: Madras: University Library, Museum Premises, Egmore.
 Netherlands: Amsterdam: Universiteits-Bibliotheek.
 Sweden: Göteborg: Stadsbibliotek.
 Switzerland: Geneva: Bibliothèque Publique et Universitaire.
 U. S. S. R.: Moscow: State Central Book Chamber, Novinsky Boulevard 36. (1927)

EXCHANGES, REVIEWS, AND INSTITUTIONS ON THE COMPLIMENTARY LIST

These are alphabetized like the Libraries.

- 1925 Baltimore, Md.: *American Speech*, care of Waverly Press.
 1925 Chicago, Ill.: *Modern Philology*, Box Y, Univ. of Chicago.
 1925 Iowa City, Iowa: *Philological Quarterly*, Univ. of Iowa.
 1925 Los Angeles, Cal.: *The Modern Languages Forum*, 1240 S. Main St.
 1926 New York City: *Revue Hispanique*, care of Hispanic Society of America, 156th St. West of Broadway, New York City.
 1926 Philadelphia, Pa.: *Jewish Quarterly Review*, care of Dropsie College.
 1927 Providence, R. I.: *Italica*, care of Prof. A. Altrocchi, Brown Univ.
 1925 St. Louis, Mo.: *Washington University Studies, Humanistic Section*.
 1927 Stanford University, Calif.: *Hispania*, care of Prof. A. M. Espinosa.
 1926 Swarthmore, Pa.: *Quarterly Journal of Speech Education*, care of Prof. E. L. Hunt, Swarthmore College.
 1925 Washington, D. C.: Periodical Division, Library of Congress.
 1925 Washington, D. C.: Smithsonian Institution, *Publications in Anthropology*.
 1925 Austria: Innsbruck: *Philological Publications* of the Univ. of Innsbruck.
 1925 Austria: St. Gabriel-Mödling bei Wien: *Anthropos*.
 1925 Belgium: Heverlee-Leuven: *Leuvensche Bijdragen*, 158 Naamsche Steenweg.
 1925 Belgium: Louvain: *Le Muséon*, 2 rue de l'Ecluse.

- 1927 Czechoslovakia: Prague: *Slavia*, Brehova 5.
- 1927 Denmark: Copenhagen: *Acta Philologica Scandinavica*, Gl. Vartovvej 20, Hellerup.
- 1925 England: London: *Le Maître Phonétique*, care of Prof. Daniel Jones, University College, Gower St., London W. C. 1.
- 1925 England: London: *Man*, care of the Royal Anthropological Institute, 52 Upper Bedford Place, Russell Sq., London W. C. 1.
- 1925 France: Paris: Association Guillaume Budé, 95 Boulevard Raspail.
- 1925 France: Paris: *Publications de la Société des Américanistes de Paris*, 61 rue de Buffon.
- 1926 France: Paris: *Bulletin de la Société de Linguistique de Paris*, à la Sorbonne.
- 1925 France: Strasbourg: Institut de Linguistique Indo-européenne, 1 rue Grandidier.
- 1926 Germany: Berlin: *Gnomon*, bei der Weidmannschen Buchhandlung.
- 1926 Germany: Berlin: *Indogermanische Forschungen*, bei W. de Gruyter & Co.
- 1926 Germany: Berlin: *Indogermanisches Jahrbuch*, bei W. de Gruyter & Co.
- 1926 Germany: Braunschweig: *Archiv für das Studium der neueren Sprachen und Literaturen*, bei Georg Westermann.
- 1926 Germany: Frankfurt a. M.: *Rheinisches Museum für Philologie*, bei J. D. Sauerlanders Verlag.
- 1926 Germany: Frankfurt a. M.: *Monatschrift für Geschichte und Wissenschaft des Judentums*, bei J. Kauffmann Verlag.
- 1925 Germany: Giessen: *Philological Publications* of the University of Giessen.
- 1925 Germany: Halle a. S.: *Zeitschrift für Indologie und Iranistik*, and *Zeitschrift für Semitistik*, published by the Deutsche Morgenländische Gesellschaft, Wilhelmstr. 36-37.
- 1926 Germany: Hamburg: *Zeitschrift für Eingeborenensprachen*, bei Prof. Dr. Meinhof, Rothenbaumchaussee 12.
- 1925 Germany: Leipzig: *Orientalistische Literaturzeitung*, bei der J. C. Hinrichs'schen Buchhandlung, Blumengasse 2.
- 1926 Germany: Leipzig: *Philologus*, bei der Dieterichschen Buchhandlung, Rabensteinplatz 2.

- 1927 Germany: Weimar: *Kleinasiatische Forschungen*, bei Hermann Böhlaus Nachfolger.
- 1925 Italy: Firenze: *Bolletino delle Pubblicazioni Italiane*.
- 1926 Italy: Milano: *Aegyptus*, Via S. Agnese 4.
- 1925 Italy: Roma: *Biblica*, Piazza della Pilotta 35.
- 1926 Italy: Roma: *La Cultura*, Fontanella di Borghese 20-22.
- 1925 Italy: Roma: *Richerche Religiose*, Via Giulio Alberoni 37.
- 1927 Lebanon Republic: Beirout: *Mélanges de l'Université St. Joseph*.
- 1926 Netherlands: Nijmegen: *English Studies*, 282 Bergendaal-scheweg.
- 1925 New Zealand: Wellington: *Journal of the Polynesian Society*, Box 523.
- 1926 Norway: Oslo: Dr. Alf Sommerfelt, Sandbakken, Ostre Aker.
- 1927 Serbia: Belgrade: *Yuzenoslovenski Filolog*, care of Prof. A. Belic, Univ. of Belgrade.
- 1925 Spain: Madrid: *Revista di Filología Española*, Calle de Almagro 26.
- 1925 Sweden: Lund: *Namn och Bygd and Linguistic Dissertations of the University*.
- 1925 Sweden: Uppsala: *Le Monde Oriental*.

BOOKS RECEIVED

Under this heading will be acknowledged such works as seem to bear on 'the advancement of the scientific study of language'.

The publicity thus given is regarded as a full return for the presentation of the work. Under no circumstances is it possible to comply with the requests being made by certain publishers for the return of books not reviewed quickly.

Reviews will be published as circumstances permit. Copies of them will be sent to the publishers of the works reviewed; and it is hoped that they will then send a second copy to replace the one which will have become the property of the reviewer.

For further bibliographic information consult the annual list of Exchanges.

Acta Philologica Scandinavica; Tidsskrift for Nordisk Sprogforskning. Edited by JOHS. BRØNDUM-NIELSEN and LIS JACOBSEN. 1. 1-304; 2. 1-288. Copenhagen: 1926-7.

American Speech 3. 1-170 (1927).

Anthropos; Ephemeris Internationalis Ethnologica et Linguistica 22. 689-1058 (1927).

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Die mit b- anlautenden Körperteilnamen des Baskischen. By C. C. UHLENBECK. Festschrift Meinhof 351-7 (1927).

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English Studies 9. 129-216 (1927).

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International Journal of American Linguistics 4. 137-167 (1927).

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Journal of the Polynesian Society 36. 207-302 (1927).

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Kleinasiatische Forschungen 1. 1-160. Edited by FERDINAND SOMMER and HANS EHELOLF. Weimar: Hermann Böhlau Nachfolger, 1927.

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Report on a Linguistic Mission to Afghanistan. Pp. 97 and 3 maps.

By GEORG MORGENSTIERNE. (Instituttet for Sammenlignende Kulturforskning Serie C 1-2) Oslo: H. Aschehoug & Co., 1926.

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The Smithsonian Report for 1926: **Our Heritage from the American Indians.** Pp. 405-10, with 12 plates. By W. E. SAFFORD.—**The Ritual Bullfight.** Pp. 447-55, with 1 plate. By C. W. BISHOP.—**The Bronzes of Hsin-Chêng Hsien.** Pp. 457-68, with 9 plates. By C. W. BISHOP.—**The Katsina Altars in Hopi Worship.** Pp. 469-86, with 3 plates. By J. WALTER FEWKES.—**Omaha Bow and Arrow Makers.** Pp. 487-94, with 4 plates. By FRANCIS LA FLESCH. Washington, 1927.

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Studier i Smålands Bebyggelsehistoria; ett Bidrag till Svensk Ortnamnshistoria. Pp. xvi + 490. By NILS ÖDEEN. Lund: Carl Bloms Boktryckeri, 1927.

Studies in the Grammar of the early printed English Bible Versions. Pp. 197. By AUGUSTA BJÖRLING. Lund: A. B. Gleerupska Univ.-Bokhandeln, 1926.

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SOME TERMS OF PHYSICS FOR LINGUISTS

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PITCH = WAVE SPEED

If we threw a cork out on the waves of a pond, it would rise and fall as they passed under it. From the time it rode one crest until it dipped down and came up on top of the next, would represent one double vibration, and the number of such dips it had to make in a second would show the speed at which the wave was travelling and could be represented in d.v./sec. So, if it made 100 such dips in a second, we would say the waves were travelling at the rate of 100 d.v./sec.

It is a well known fact that sound waves travel thru the air in much the same manner the waves on a pond are propagated when you throw a pebble into it; that is they radiate in all directions from the point of stimulus. But unlike the pond waves which are confined to one flat surface, they are transmitted up and down as well as along a horizontal plane. If we could see one at any given instant it would appear much like a series of progressively larger balls one inside the other, except that they would be made up of alternate layers of condensed and rarified air instead of rubber walls, and each would be spaced at an equal distance from the other.

Of course in either case it is what the physicist calls the *energy* of the wave which travels, and not the medium itself. The cork out in the middle of the pond will bob up and down in the same place as the gently undulating waves pass under it; and the same particle of water will remain in the same place regardless of the dips which pass along, all providing that no other factor such as churning, friction, capillary attraction, etc. be involved.

So in Speech. Consequently we must not lose sight of the fact that these vibrations we talk of are but energy vibrations. They are of the type of shocks we observe if we see an engine give a long string of freight cars a bump when the one farthest away is cut loose and not coupled on but merely resting against the string; the string stays where it is, but the last car goes shooting down the track in consequence of the

energy transmitted by the shock the engine gave the first one bumped into.

VOWEL PITCH = CAVITY TONE (WHISPERED)

Much the same thing happens in the cavity we are constantly called upon to consider in speech phenomena. Since it is filled with air, made up of innumerable particles lying in close proximity to each other, it is of course much more like a mass of gelatin than a string of cars. But we all know what happens to such a gelatinous mass confined in a pan; we can give it a flip with the finger at any point, and the shock is almost instantaneously shown throughout the mass; yet it is only indicated as a tremble or vibration, without any permanent distortion of the body itself. And if we so placed a recording needle that it would rise and fall with the vibrations which our flip had stimulated, we would note that the rate of vibration varied with the volume of the gelatin. The more gelatin we had, the slower the vibration would be: that is, the fewer the d.v./sec. we could count. And the smaller the mass, the greater the number of d.v./sec. The air volume in the mouth functions in a like manner.

If we disregard heat and altitude, the density of the air will be practically constant; so the rate of vibration natural to the volume of air in the vocal cavities, will be dependent on their size. And this size can be varied by the tongue and other organs.

It is this physical fact which is made use of to explain vowel quality when we talk in terms of the 'Cavity Tone Theories'. The average reader would probably do well to divorce those theories from the voice, and think only of the whispered vowel. Such theories postulate that the vowel quality is due to the cavity tone which is dependent on the size of the cavity and its openings. The smaller the cavity, the greater the number of d.v./sec. its contained air volume will make; and the larger the cavity, the slower its mass of contained air will vibrate. Hence the laws which we might state thus: the smaller the cavity the higher the pitch; and the larger the cavity the lower the pitch. To this we need add a corollary involving the openings, which must be taken into consideration, reading, the larger the opening the higher the pitch, and the smaller the opening the lower the pitch. This latter may seem a contradiction to the non-scientific reader since the larger cavity gives a low pitch, but a large opening a high pitch. Yet it is not, since the opening governs the pitch not because of increasing unwieldiness of a large air volume but rather by reason of the freedom with which it

permits the vibrations to surge in and out; and hence it can be compared with friction; as the opening gets smaller, the friction increases and slows down the vibration more and more. So a small opening and large cavity both give a low pitch.

The surfaces which form the walls of the cavity, must inevitably create friction to retard the vibration of the air mass in much the same way. But in general it may be said that those who have utilized the cavity-tone theory in accounting for vowel quality have been content to speak in terms of the resonator or air-volume effect, and to disregard the walls.¹

VOICE PITCH=VOCAL CORD VIBRATION

Some have had a tendency to confuse the pitch of the cavity tone with that of the voice. As we have noted above, that of the cavity is created by and is natural to the total volume of air contained therein; and it is the pitch we distinguish when we whisper the vowels, getting progressively higher as we run thru the series [u, o, a, e, i]. But the pitch of the voice is created by the vibration of the glottal lips ('vocal cords'); that is the vibration we feel when we place the finger on the 'Adam's Apple' and say z-z-z-z-z- (compare with it s-s-s-s- which has no voiced pitch).

It is with this voice pitch that we sing, raising it and lowering it at will. It also serves our speech in a like manner to vary the shades of meaning in what we call intonation. But the voice pitch likewise functions to make our speech sounds audible at a greater distance. Theories vary in their explanation, but perhaps we might at least say that the voice vibrations then act in a way somewhat analogous to that of the radio carrier wave: the waves of the speech patterns are superimposed upon those of the vocal cords; and the small superimposed vibrations correspond to what, for convenience, are generically referred to as 'upper partials' (though perhaps inaccurately where one is speaking in terms of Hermann's 'formant' or Scripture's 'puff' or some other inharmonic theory).

Practically all vowel theories, however, agree that in ordinary voiced speech, and in song, it is the impulse originating in the vibration of the vocal cords which stimulates the vowel cavity. In the whisper we merely substitute an air hiss or rasp for the voice.

¹The author, therefore, has often felt it necessary to stress the possible effects these surfaces might have in changing vowel quality. See his forthcoming *Speech and Voice* (Macmillan).

And in the glottal (or vocal cord) note, we inevitably have present a whole range of partials, just as does a single vibrating piano string. That is, there is the octave, and the octave of the octave; there is the fourth, and the fifth, etc., all present in the one note. If you vary these you alter the quality in the tone produced even though the pitch of the string is kept constant. So for example, if you strike a piano string with a soft felt hammer, you produce a 'mellow' tone, for then you damp the piercing high partials. Yet if you utilize the same string kept at exactly the same pitch, and stimulate it by striking with a hard wooden hammer, the tonal quality is radically changed, and you call it 'metallic' or 'clear' or 'ringing'; for in this case the high partials have been favored, rather than suppressed. In some of the 'inharmonic' theories used to explain differences in vowel quality, their influence is either denied or minimized; but it would probably be wise to note how they might function.

If not so suppressed or favored, these partials would form a diminishing loudness pyramid: that is, as they get higher and higher in pitch, they normally progressively decrease in loudness. But if a tin can, or bottle, or other such cavity which we call a resonator, be placed in front of the string it will amplify any partial which corresponds to its pitch, and thus make it boom out louder than otherwise and break in at that point on the progression of decreasing loudness. This also would change the 'equality' aspect in the note without altering the pitch.

There is a possibility of either one, or both of these two factors being involved in varying the 'quality differences' manifest as between vowels, or voices. That is both the air volume in the cavities above the vocal cords, and the varied involvement of hard or soft surfaces may cooperate with varied type of vibration in the vocal cords to accomplish that end. If so, vowel and voice quality differences may be partially accomplished thru the type of damping (deadening) or amplification (accentuation) to which certain of those upper tones are subjected as they pass thru the vocal cavities. Certainly it is true that the ear distinguishes vowels which are 'bright' 'clear' and 'metallic' having a tonal quality analogous to that of the piano string which was struck by a hard wooden hammer, for instance [i] in *beet*; and others, such as [u] in *boot*, or (comparatively) [ɪ] in *bit*, which are 'mellow' or even 'dead' quality vowels, comparable to the quality produced on the same string by stimulating its vibrations with a soft felt hammer. And we know that there are both hard and soft surfaces in the vocal cavities; and further that the muscular tissues are subject to a varying degree of tension.

Naturally it follows that the tissues themselves may set up friction

noises when the air rush strikes them. They surely do in the production of [j] as in *million*; and it is these which probably distinguish this sound from [i] as in *lien*. And they are still more pronounced in [ʒ] as in *azure* which passes into what we call a consonant merely because of their intervention.

All of that has to do with 'quality' in speech sounds. An understanding of distinctions in 'quality', how they are brought about, and how they can be scientifically and accurately described, is of prime importance to every individual interested in any aspect of speech and voice. The author looks forward to the day when in the realm of description alone classification of sounds may turn from our present physiological voice-organ placement (especially tongue position) basis, which is so unscientific and immaterial, to the more reliable and pertinent acoustic, 'quality description', or physical cause process.

LOUDNESS (INTENSITY—AMPLITUDE)

Naturally the loudness of the voice may also vary. And this is often erroneously spoken of as resonance, and a loud voice as 'resonant' or 'vibrant'. It is said to have carrying power.

People sometimes draw the false conclusion that the voice is carried out to the ends of a large hall for example, on a stream of air issuing from the mouth. But the actual amount of air in the current which passes thru the glottis (vocal chink) probably exercises practically no influence on the currents in the main air mass of the hall even at a distance of one yard from the mouth. In other words, when we speak loudly, we do not fling the current out to the ends of the hall, as some might think. It is, we may repeat, the energy waves which we transmit.

And this again is unlike the single shock produced by the one pebble we threw into the pond. The waves in speech do not taper off in loudness as long as the vowel is being vigorously prolonged, because the vocal cords repeat their shocks at the rate of so many per second. If they open and close 256 times per second they produce 256 such shocks in that time, and a sound results having a pitch of middle C on the piano (where we talk in terms of the Physical Pitch Standard) which we classify as having a frequency of 256 d.v./sec; and this pitch also carries that of the vowel or the characteristics of the vowel quality with it, this being constantly renewed so long as the shocks of the voice vibration are repeated. Hence neither the pitch, quality, nor loudness dies out as the ripples on the pond do where only one shock is given.

Neither does the loudness of that speech sound have anything to do with the distance we can force the air current. For the loudness is

dependent on the amount of energy behind the shock, or, if you will, on the amplitude of the swing, or oscillation of the vibration.

That oscillation we can again best illustrate by the swing of the pendulum. The force of the push we give it will determine how far out it will swing each time; and the farther it swings, the farther it would knock anything else that would happen to 'get in its way'—there is more energy behind it. In a like manner, loud speaking or loud singing is dependent on the energy behind the attack; and that does not mean that a large amount of air is allowed to escape; it says merely that the muscles expel that air with considerable force, and that the 'vocal cords' or rather glottal lips offer such an impediment as to transmit the number of vibrations they emit per second, with a force manifest in an amplitude which increases as the energy which creates the same gets greater (providing the pitch is kept constant).

So that the number of d.v./sec. refers to the number of wave crests which pass a fixed point in a second and is an expression of the vibration *frequency* which creates the *pitch* of any sound. And the *amplitude* or height of that wave or vibration train being a resultant of the energy behind it, or of the force which propagated it, is an expression which in lieu of any other must often stand for the physical statement of its *loudness*. It must be borne in mind however, that if we take a pitch at say 256 d.v./sec. showing a curve of given amplitude, that same amplitude will not represent the same loudness in its octave of 512 d.v./sec. For the term amplitude is an expression of the physics of the sound. And the term loudness is one we apply to what the ear hears.

D. C. Miller² makes a very lucid statement of the correspondence between the two, in words which even the non-technical reader can understand if he will pause long enough to weigh them carefully. If the frequency remains constant, 'the *energy*, or what we will call the intensity of a simple vibratory motion, varies as the square of the amplitude'. If the amplitude remains constant, 'the energy varies as the square of the frequency'. When both frequency and amplitude vary, 'the intensity (or energy) varies as the square of the product of amplitude and frequency.' Hence it will be seen that a given intensity requires a progressively decreasing amplitude as the pitch gets higher. These facts are graphically portrayed by Miller.

It will be seen that anything which decreases the energy behind a sound, deadens its loudness. The friction which soft surfaces set up does just this—they absorb the energy which propagates the sound. This is what is referred to when we say a sound or one of its partials, or groups of partials is deadened.

² *Science of Musical Sound*² 53 (1922).

A NOTE ON SOUND-CHANGE

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On the basis of correspondences between Fox, Ojibwa, Plains Cree, and Menomini, the following correspondences were set up in LANGUAGE 1. 147 ff., as representing distinct phonemes of an ancestral speech, 'Primitive Central Algonquian':

PCA	Fox	Ojibwa	Plains Cree	Menomini
tck	hk	ck	sk	tsk
ck	ck	ck	sk	sk
xk	hk	hk	sk	hk
hk	hk	hk	hk	hk
nk	g	ng	hk	hk

This left a discrepant case, namely, the very common initial element for *red*, as in Fox meckusiwa *he is red*, O mickuzi (misprinted 1. c. 152), Plains Cree mihkusiw, cf. M mehkōn. For, although the group ck is, as above indicated, common enough in F and O, and the group hk common enough in Plains Cree and M, this distribution of the groups between the languages is unique.

Since there appeared to be no point of contact for analogic substitution of hk for ck, or vice versa, in any of the languages, and since borrowing of the stem for *red* seemed unlikely, it was necessary to suppose that the parent speech had in this stem for *red* a different phonetic unit, which was symbolized by

PCA çk F ck O ck Plains C hk M hk.

This supposition was necessary (or, in fact, justifiable) only on the assumption that *phonemes change*,—i.e., that sound change goes on regardless of meaning and is therefore subject to phonetic conditions only (and is not affected by frequency, euphony, meaning, etc. of words and other forms).

For those students who reject this postulate or seek in some way to dilute it, a correspondence like the above would be meaningless, since the ck of F and O, or the hk of Plains C and M might be due to 'sporadic sound-change' or to 'perseveration' of an old sound, or the like.

After the above-cited essay was in the hands of the editor, I was able to hear, for a week, the Swampy Cree of The Pas, Manitoba (on a field trip for the Victoria Memorial Museum of Ottawa). There I heard the forms:

mihtku- *red*, particle prefixed to nouns: F meckwi-, Plains C mihku-, mihtkusiw *he is red*, cf. above.

mihtkuspwākan *catlinite pipe*, animate: F meck-uhpwāgana, Plains C mihkuspwākan.

mihtkustikwānāwisip *red-headed duck*.

mihtkwāpāmak *red-willow*: Plains C mihkwāpāmak, (cf. O mick-wābīmij, Baraga 250) M mehkūpīmak.

mihtkwāw *it is red*: F meckwāwi, O mickwā (Jones, *Ojibwa Texts* 2.144. 16; Baraga 250); cf. M mehkīw.

mihtkwākin *red cloth*: F meckwāgenwi, O mickwāgin (Baraga 251), Plains C mihkwākin; cf. M mehkīkan.

The consonant-group htk did not apparently, occur in any other element.

The postulate of sound-change without exceptions will probably always remain a mere assumption, since the other types of linguistic change (analogic change, borrowing) are bound to affect all our data. As an assumption, however, this postulate yields, as a matter of mere routine, predictions which otherwise would be impossible. In other words, the statement that *phonemes change* (sound-changes have no exceptions) is a tested hypothesis: in so far as one may speak of such a thing, it is a proved truth.

[The example is an instructive commentary on Oertel, *Lectures on the Study of Language* 260: 'the "phonetic law" . . . rests its claim to recognition not upon a *causal explanation* but upon its *relative universality*. That is to say: Because a certain sound change can be observed in a large mass of cases it is elevated to the rank of a "phonetic law".' Compare also his contention (261) that law 'is used in grammar with a peculiar and special signification. It stands for a formula by which a large mass of phonetic correspondences are summed up.' One may also adduce in refutation the way in which Sommer, *Handb. d. lat. Laut- u. Formenlehre*² 33-4, argues to the existence in Latin of a phonetic law *-rwo-* becomes *-ro-* (later *-ru-*) not from 'a large mass of examples' but from the single form *parum*, G. M. B.]

WALLESER ON THE HOME OF PĀLI

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The general argument of Walleser (*Sprache und Heimat des Pāli-Kanons*) is as follows: The agreement of all old sources that the language in which the Tipiṭaka was brought to Ceylon was that of Māgadha is too strong to be lightly cast aside. The capital of Magadha was Pāṭaliputta (Sanskrit Pāṭaliputra). In Buddha's time it was known as Pāṭali-gāma 'Pāṭali Village.' Walleser accordingly goes back to Wilson's theory that Pāṭaliputra is a transformation of Pāṭalipura 'Pāṭali Fortified Town.' The language therefore would be known as Pāṭali Bhāṣā, or simply Pāṭali, in the same way that the language of Magadha was known as Māgadhi. Now it is well-known that in the Middle Indo-Aryan dialects stop consonants (when unaspirated) have a marked tendency to drop out, and frequently the vowels thus brought into hiatus contract. Examples of this are found even in Pāli, thus Kusināra (Sanskrit Kuśinagara). So Pāṭali could become Pāali and finally Pāli. As a parallel on the Asokan inscriptions Petenika (so!), from *Prātiṣṭhānika (a vrddhi derivative of Pratiṣṭhāna) is adduced. Hence Pāli is the language of Pāṭaliputta (Sanskrit Pāṭaliputra). The charge that Pāli can not have had its home in Magadha because of its phonetic and grammatical peculiarities can be met because this does not take into consideration the wide territories of Magadha: within these a rather considerable range of dialectic peculiarities is possible; again, Pāli as a literary language existed over too long a stretch of time to expect uniformity in every detail; Pāli being contemporaneous with Buddha is naturally more archaic than the Asokan dialects, but in any case Pāli is near the dialects of the eastern Asokan inscriptions.—A wealth of literary references are given by Walleser to support his views, and a number of other linguistic points are treated incidentally.

The home of Pāli has long been a favorite theme, but I regret to say that Walleser has not brought us one step nearer the correct solution. At home in philosophy; in Chinese, Thibetan, Sanskrit, Pāli, etc., literature—he is quite out of his element in pure linguistics. And the problem of the home of Pāli is essentially a linguistic problem.

We are not vitally concerned with what Pāṭaliputra is a transformation of; in any case Pāṭali may at least provisionally be accepted as the designation of the language of the town. Now it chances that on the inscriptions of Asoka a correspondent to Sanskrit Pāṭaliputra is found only on the Gīrnār redaction of the Fourteen Edicts, namely, Pāṭalipute (i.e. Pāṭaliputte, a locative). But we can be quite certain that the Māgadhan form would be *Pāṭaliputa and the Shāhbāzgarhi form *Pāṭaliputra (so). The loss of intervocalic *ṭ* in any of the Asokan dialects is without parallel, to say nothing of the contraction of the two vowels subsequently (as is assumed). For Bühler rightly saw that any attempt to connect Petenika with Pratiṣṭhāna must fail for linguistic reasons. *Pratiṣṭhānika would have yielded Shāhbāzgarhi and Mansehra *Pratistanika, Gīrnār *Pratiṣṭānika, Asokan Māgadhan *Pāṭiṭhānika. Observe, however, that corresponding to Sanskrit Pratiṣṭhāna we have the early ablative Patīṭhānā (so) twice, *Arch. Sur. Western India* 4. 83, as well as the later Patīṭhāṇe (locative) and Paīṭhāṇa (in a compound), ib. 5. 76, Jaina Māhārāṣṭri and Śauraseni Paīṭhāṇa.¹ It may be said that the early ablative Patīṭhānā apparently somewhat worried Walleser, but so intent was he on establishing corroborative evidence that he overcame his scruples without assigning any reason.² Similarly he seems to have overlooked the later forms corresponding to Sanskrit Pāṭaliputra: Pāli Pāṭaliputta; Māhārāṣṭri and Māgadhī Pādaliutta; Jaina Māhārāṣṭri Pādaliputta; Paisāci Pāṭaliputta.³ He does indeed seem to be aware of the fact that cere-

¹ As I have recently said (*JAOS.* 46. 257) my old derivation of Petenika from *Pāṭtrayanika (*IF.* 24, 52f) is the only one thus far suggested that is phonetically impeccable.

² Save saying 'indem keine andere Möglichkeit der Erklärung dieses Namens ersichtlich ist.' He reports Bühler's valid objection to the early etymology, but does not give Bühler's solution; he apparently overlooks my paper on the etymology of the word.

³ That the various Prākṛit forms corresponding to Sanskrit Pratiṣṭhāna and Pāṭaliputra are not cited or considered by Walleser may be due to the fact that he, following Pischel, considers the various Prākṛit dialects 'Kunstsprachen.' So they are, no doubt, but they are based upon true vernaculars. Incidentally he quotes Pischel approvingly to the effect that to draw chronological conclusions regarding Prākṛit from inscriptions is wrong. Years ago both Jacobi and Bloch did so; and the dialects of the Buddhist fragments published by Lüders prove they were right. Pischel also said (*Grammatik* 32) 'Über das Alter und die Aufeinanderfolge der Dialekte Untersuchungen anzustellen, ist müßig.' The researches of Jacobi on Apabhraṃśa, to say nothing of those of Bhāṇḍarkar, as well as those of Tessitori on Old Western Rājasthānī, alone would show the error of such a statement. As a matter of fact Pischel's pupil, Konow, in his essay on Paisāci

bral \ddot{t} in Middle Indo-Aryan languages is not lost when between vowels, but does not see that this is fatal to his proposed etymology;⁴ and overlooks the history of intervocalic \ddot{t} in Neo-Indo-Aryan languages.

As to the existence of dialectic variation in ancient Magadha, this has indeed been proved. But such variations are of a very minor character. To consider Pāli as a Māgadhan dialect is to fly in the teeth of known facts. The truth has never been stated better than by Bloch (*La Formation de la Langue Marathe*, 8): 'Quant a la langue, les livres eux-mêmes lui donnent le nom de māgadhi. Or tout ce que nous savons de la māgadhi par l'épigraphie ou la littérature va contre cette appellation.'

That Pāli as a literary language existed over a long period of time, is true: but this is not news. Neither is the point that it is not uniform. However, neither of these facts has any bearing on the thesis at stake, namely, that Pāli is the language of Pāṭaliputra. They would only have a bearing if it could be shown that the early Pāli texts as we have them were written in a language which was decidedly Māgadhan, and that the language of the later texts was increasingly un-Māgadhan. And this is not the case. It will be understood I do not refer to such texts as were written when Pāli (as we actually have it) was already strongly entrenched as a literary language. It is quite another matter to concede that our existing old Pāli texts may be transformations of works originally written in some Māgadhan dialect: but such a view, once again, is not novel.⁵ Nevertheless this does not solve the problem of where Pāli as it exists in the canonical texts had its home.

We now come to the assertion that Pāli is close to the language of the eastern (i.e., Māgadhan) inscriptions of Asoka. This hardly merits

(ZDMG. 64. 95f), did come to very sane conclusions as regards the chronology of this dialect. Incidentally I remark that Pischel himself, in his *Grammatik*, at times drew chronological conclusions, as any careful reader can see. In quite the same way, Pischel felt at liberty to chastise native Prākṛit grammarians unmercifully, though he bitterly resented any one else doing so. Similarly, both Pischel and Geldner often rebuked Sāyaṇa in their various contributions to Vedic criticism and exegesis: but woe betide another who had the hardihood to do so.

⁴And as Walleser's derivation of Pāli is false, his derivation of paliyāyāni on the Bhabra edict must also fall, irrespective of the fact that paliyāyāni can not come from *pāṭalikāyāni for other phonetic reasons.

⁵The views of Windisch, Levi, Lüders, and Bloch are well-known. See *Transactions Internat. Cong. Orientalists held at Algiers*; JA. 1912; *Pruss. Akad. Wiss.* 1913 (LIII) 1003; *La Formation de la Langue Marathe*, 8; see also S. K. Chatterji, *Origin and Development of the Bengali Language*, 55-7.

an elaborate refutation, for it is opposed to the views of Westergaard, Muir, Kuhn, Franke, Bloch, Lüders, and Michelson. The lack of such sounds as *ṇ*, *ñ*, *r* in the Asokan Māgadhan dialect, the existence of the phonetic transformations to be seen in *puluva* (Sanskrit *pūrva*, Pāli *pubba*) *kaṭaviya* (Sanskrit *kartavyā*, Pāli *kattabba*) and *kayāna* (Sanskrit *kalyāṇa*, Pāli *kalyāṇa*, *kallāṇa*), such inflections as *pitinā* (Pāli *pitunā*), *tasi* (Pāli *tamhi*), *lājinā* (Pāli *raññā*, Sanskrit *rājñā*), to mention only a few specific cases, is quite enough to separate Pāli from Asokan Māgadhan by a wide gulf. The point that Pāli being contemporaneous with Buddha is more archaic than the Asokan dialects, can only be partially sustained. It is true for example that Pāli *-tvā* (Sanskrit *-tvā*) is more archaic than Gīrnār *-tpā*, but, broadly speaking, as a whole the Gīrnār dialect is more archaic in phonology than Pāli, as is also the Shāhbāzgarhi and Mansehra dialect; and in a few instances so is the Asokan Māgadhan dialect. Wherefore it can not be maintained that if we had Asokan Māgadhan inscriptions contemporaneous with Buddha their language necessarily would be closer to Pāli than the language of those we actually have. It may be freely admitted that in a few respects Pāli is closer to Asokan Māgadhan than to other Asokan dialects, for example, in the treatment of *kṣ*. But such cases as *siyā* (Sanskrit *syāt*, Asokan Māgadhan *siyā*), *hoti* (Sanskrit *bhavati*, Asokan Māgadhan *hoti*) should not count, for we have the doublets *assa* (Gīrnār *asa*, i.e., *assa*), *bhavati* (Gīrnār *bhavati*), etc. That Pāli *siyā* etc. are not to be considered as a mere dialectic borrowing (in Geiger's sense) but rather relics of a Māgadhan original of which the existing Pāli canon is a transformation (in the sense of Windisch), is supported by the fact that some of them have corresponding forms in Ardhamāgadhi Prākṛit (e.g., *siyā*). Now since Buddha and Mahāvīra presumably spoke a language which if not absolutely identical was at least very similar,⁶ it is natural to think of *siyā*, etc. as being part and parcel of their speech. Where Asokan Māgadhan agrees with both Pāli and Ardhamāgadhi, the presumption is very strong that such was the case. But that is a very different thing from saying that Pāli as we have it, is a kind of Ardhamāgadhi, or that Pāli though not a pure Māgadhi nevertheless was a 'Verkehrsprache' whose foundation was Māgadhi, and which Buddha himself used, both of which are maintained by Geiger.⁷ And naturally the Ardhamāgadhi of canonical

⁶ Cf. S. K. Chatterji, *Origin and Development of the Bengali Language*, 55.

⁷ Very similarly in the Pāli Dictionary of the PTS page 1 we find 'The Pāli of the canonical books is based on that standard Kosala vernacular as spoken in the

works of the Śvetāmbara Jains in the redaction as we have it, can not be the language of Mahāvīra, roughly a thousand years earlier. Nor can Ardhamāgadhi, as we have it, be a linear descendant from Asokan Māgadhan as Lüders has maintained: see *AJP* 41. 265-74. But, as I have previously said, it is quite certain that it is derived from a dialect which had important features in common with the latter dialect.

That Pāli, all in all, is close to the Gīrnār dialect of the Asokan inscriptions has been maintained by Westergaard, Muir, Kuhn, Lüders, and Michelson; nor have their views ever been refuted. (The stand taken by Franke is very similar to theirs.) But it should be remembered that in the third century B.C. there were other Indo-Aryan dialects besides the Asokan ones. For some of these there is direct evidence; for others there is indirect evidence (for example, a precursor of Māhārāṣṭrī Prākṛit must be assumed, and this precursor can not have coincided exactly with any of the Asokan dialects). I repeat what I said nineteen years ago, *TAPA* 40. 281, as it seems to have been universally overlooked: Pāli is a literary language only and does not represent any one spoken vernacular, and whatever dialect forms the basis of the written language, that dialect does not coincide exactly with any one of the dialects of the inscriptions of Asoka.

6th and 7th centuries B.C.' On the next page it is implied that Asokan Māgadhan is a younger form of the standard Kosalan lingua franca; which is easily refuted if Pāli is identified with the earlier standard Kosalan lingua franca: see the discussion above. The statement by Chatterji, op. cit. 57, that 'The essentials of Pāli phonology and morphology agree with Śaurasēnī of the second MIA. period more than any other form of MIA.' is untenable; the contrast between such locatives as Pāli tamhi, Śaurasēnī tassim (Sanskrit tasmin), and the favorite Pāli gerunds in -tvā, etc. are sufficient to disprove the theory. Kern, *Over de Jaartelling de Zuidelijke Buddhisten* 14 (1873), held practically the same view. He also saw the impossibility of considering Pāli as a form of Māgadhi.

[Sir George Grierson's essay on Pāli in the Bhāṇḍarkar Commemoration Volume and Walleser's reply to it are inaccessible.]

THREE NOTES ON THE GATHAS OF THE AVESTA

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1. THE ETYMOLOGY OF *afšman*

The first two lines of *Yasna* 46.17 are as follows:

yaθrā vō afšmānī sēnghānī
nōiŋ anafšmaṃ dājamāspā hvō.gvā

The difficulty lies in the word *afšmānī* and in its opposite, in the next line. Both are obviously neuter accusatives, objects of the verb. But the etymology, and therewith the precise meaning, is uncertain. Bartholomae takes *afšman-* as meaning 'Schaden, Nachteil', and refers it to *afša-* 'Schaden, Nachteil, damnum', found once in the late Avesta (*Vendidad* 13.10) and by him doubtfully connected with Latin *damnum* in etymology¹; he translates, '(Paradise,) wo ich nur eure Nachteile melden will—nicht die Vorteile—, o Jāmāspa Hvōgva', and refers it to the sufferings at the hands of the unbelievers². Moulton³ follows Bartholomae: 'Where . . . I will recount your wrongs not your successes'. Geldner⁴ translates the words by 'Musterhaftes, nicht Unstatthaftes'; in Moulton's opinion⁵ he seems to connect *afšman-* with *afšman-* 'meter'. Jackson⁶ has 'ordinances.'

I wish to suggest that *afšman-* is a derivative of the stem seen in Sanskrit *apas-* 'work, action, especially sacred act, sacrificial act'⁷, identical with Latin *opus* 'work.' To this, with the suffixal syllable in the zero grade, the suffix *-men-* is added, giving Aryan **aps-man-*, from which Avestan *afšman-* develops regularly.⁸ The meaning will be not unlike that of Sanskrit *karman-* 'act, religious act or rite' and ultimately

¹ *Altiran. Wrth.* 104, 103.

² *Die Gatha's des Avesta*, 1905, 80.

³ *Early Zoroastrianism*, 376.

⁴ In Bertholet, *Religionsgeschichtliches Lesebuch*, 327.

⁵ *Early Zor.* 376 ftn.

⁶ *Zoroaster*, 77.

⁷ Monier-Williams, *Sanskrit-English Dictionary*, 53.

⁸ Reichelt, *Awestisches Elementarbuch*, §84.2 and ftn., §88.

'merit earned by good deeds'. The stanza will then mean 'Where I will relate your good deeds, and not your evil deeds', a natural contrast which is more to be expected than that given by other interpretations. Though Zoroaster may seem to be conniving at the overlooking of Jamaspa's evil deeds, still those evil deeds will be known from other sources, and Zoroaster's function is surely to stress the good deeds of his converts.

2. THE GENITIVE *mana* IN *Yasna* 50.1.

The personal pronouns, in most of the oblique cases, have accented and unaccented forms in the Indo-Iranian dialects. Thus Sanskrit has, as genitive singular of the first person, accented *māma* and unaccented *me*. In the Iranian we find similarly Old Persian *manā* and (enclitic) *-mai*y, later Avestan *mana* and *mē*. The peculiar Skt. *māma* may be explained as a suffixless stem-form, reduplicated like the Latin accusative and ablative *meme*, *tete*, *sese*; the Iranian *mana* shows dissimilative change of the second nasal.

In the Gathas of the Avesta, the enclitic form appears in *mōi*, as at *Yasna* 44.10, but the accented form seems no longer to be recognized as occurring in the *mā nā* of *Yasna* 50.1, where Bartholomae formerly admitted it.⁹ Reichelt does not list the form.¹⁰ Bartholomae takes *nā* as a mere emphatic particle,¹¹ and so does Moulton¹².

Yet a better meaning is given by Bartholomae's older view. The text is:

<i>kaṭ mōi urvā</i>	<i>isē čahyā avanhō</i>
<i>kē mōi pasōuš</i>	<i>kē mā.nā θrātā vistō</i>

Moulton's translation is 'Can my soul count on anyone for help? Who is there found for my herd, who for myself a protector indeed . . .?' This interpretation varies considerably from Bartholomae's, but is practically that which I wish to give to the stanza. The contrast between 'my herd' and 'myself' naturally calls for the accented form of the personal pronoun, and that form is *mana*, here written *mānā*, with permissible orthographic variations. Moulton's 'indeed' therefore falls out.

That *nā* might here mean 'man', is rendered unlikely by the next line,

⁹ *Die Gāthā's und heiligen Gebete*, 1879, pp. 57, 112.

¹⁰ *Aw. Elmtb.* p. 213.

¹¹ *Altir. Wtb.* 228, 1030.

¹² *Early Zor.* 382.

which begins *anyō ašāt*, 'other than Asha', and whoever or whatever Asha is, he could not be included in the category of 'men'.

3. AN EMENDATION OF *Yasna* 53.4.

The 53d *Yasna* represents the marriage of Jamaspa with Pourucista, the daughter of Zoroaster. Moulton's translation¹³ is as follows; Jamaspa speaks: 'Earnestly will I lead her to the Faith, that she may serve her father and her husband, the farmers and the nobles, as a righteous woman (serving) the righteous. The glorious heritage of Good Thought . . . shall Mazdah Ahura give to her good Self for all time.'

There is little difficulty with the translation, except in the last sentence where a gap is indicated. Here the meter demands three syllables for the final corrupt and unintelligible words of the text:

manaphō vaṇhēuš x'ēnvaṭ haṇhuš mēm bēduš

For the last two words I propose *mām baduš* 'which has attached itself to me'.

The *baduš* is a neuter perfect participle of the Avestan root *band*-¹⁴, Skt. *bandh*- 'bind'; in method of formation it is identical with Avestan *viduš*¹⁵ from root *vaēd*, Skt. *viduṣ*. The perfect tense active often has the intransitive meaning which is borne by the middle voice, and this is the meaning which I here see in it. The pronoun is then an accusative of the goal. But if one prefers to take the participle as active in meaning, he has essentially the same sense: 'which has bound me to it'.

Whatever one may think of this emendation, it has the merit of simplicity, and of a good meaning. Jamaspa declares that he will keep his wife true to the hope of Paradise which has already claimed him for its own.

¹³ *Early Zor.* 388.

¹⁴ *Altir. Wtb.* 926

¹⁵ *Altir. Wtb.* 1316.

THE CONSONANT *þ* IN GOTHIC *stōþ* : *stōþum*

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The infinitive form of this verb is *standan*. The stem of the verb must therefore have been **stað-*. Accordingly the preterite singular form *stōþ* must represent an earlier **stōð*; hence we should have expected a preterite plural form **stōðum* (= **stōðum*) instead of *stōþum*.

The assumption that the *þ* in Goth. *stōþ*:*stōþum* represents an original *þ*, as Streitberg¹ maintains, is untenable in view of the infinitive form *standan* (whose *-d-* must go back to an original **ð*) and in view of the conditions in North and West Germanic where the consonant in question throughout the verbal system must go back to an original **ð*; cf. ON *standa*, *stóð*²: *stóðum*, *staðinn*; OE *standan*, *stōð*³: *stōdon*; OS *standan*, *stōð*:*stōdun*; OFris. *stonda*, *stōð*; OHG *stantan*, [ar]-*stuat* (Otfrid): [vor]-*stōtun* (Tatian).

It is clear that the Goth. plural form *stōþum* represents an analogical form which has displaced an original **stōðum* = ON *stóðum*: WGerm. **stōðum*. What was the reason for this?

The *þ* in Goth. *stōþum* could hardly have been transferred from the singular form *stōþ*, for there is elsewhere in Gothic no case recorded where an original sonant spirant in the preterite plural of a strong verb has been replaced by the (final) surd spirant of the preterite singular form.⁴ An apparent exception to this rule is the preterite present *áih:áigum, aihum*. But here there must be taken into consideration an additional factor which could not have obtained in the case of *stōþ*:*stōþum*, namely the influence of the (new weak) preterite form *áihta* with original *h* < **ǵ*. There is therefore no reason to separate the

¹ Cf. W. Streitberg, *Got. Gramm.*⁴ §133. Here Streitberg gives Goth. *stōþ*:*standan* as an example of the shifting *þ* > *ð* according to Verner's Law.

² The ON characters *þ*:*ð* were used interchangeably, but the *þ*:*ð* of this verb must go back to an original **ð*, as the *ð* (< **ð*) of the infinitive *standa* shows.

³ PG *ð* was shifted to *ð* (OHG *t*) in WGerm. The WGerm. preterite and past participle forms with *n*-infix (cf. OS *stuond* pret., OE *standen* past part., etc.) are not given, in order to preserve the parallel with Goth. *stōþ*:*stōþum* without *n*-infix.

⁴ Cf. e.g., *baip*:*bidum*; *baup*:*budum*; *baþ*:*bēdum*; *grōf*:*grōbum*; *skōf*:*skōbum*, etc.

parallels of the 6th ablaut series *grōf:grōbum*, *skōf:skōbum*, etc. from *stōþ:*stōdum*.

If we turn to the 6th ablaut series (to which *standan* belongs) we do not find a single Gothic verb whose stem ends in *d*, several, however, whose stem ends in *-þ*, so that for the preterite plural of the 6th ablaut series the pattern *-ōþ:-ōþum* became established; cf. *hlaþan*, *hlōþ:hlōþum*; *fraþjan*, *frōþ:frōþum*; *skapjan*, *skōþ:skōþum*. From the past participle form *garapana* (Mark 10. 30) we may also infer the forms **rapjan*, **rōþ: *rōþum*.

Since the type *-ōþ:-ōdum* (cf. *stōþ:*stōdum*) did not elsewhere occur, we may assume that the form **stōdum* was supplanted by the form *stōþum* in conformity with the established pattern *-ōþ:-ōþum*. Similar cases where forms of an isolated type, such as Gothic **stōdum*, are made to conform with an established pattern, occur very frequently in the OGerm. languages; cf. e.g., Gothic *finþan:fanþ* > OE **fiþan: *fōþ*, which was displaced by *findan: fand* in conformity with the established type *bindan: band*; or ON *fann:funnum* (earlier *fundum*) in conformity with the established type *brann:brunnum*, etc.

THE LANGUAGE OF THE *CUENTOS POPULARES ESPANOLES**

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10. *continmás*

This form of *cuanto más* occurs only once, in a folk-tale from Zamora, 192: 'Güeno, pues la chica fué creciendo y el diablo *continmás* iba creciendo la chica más se enamoraba de ella.'

I have no more examples from the peninsular Spanish dialect literature known to me but exactly the same form is found in Chile, Costa Rica, and New Mexico.²⁵ A dialectic Spanish form *cuantimás*, however is found in Aragón, Argentina, and Mexico and is used by Santa Teresa.²⁶ In La Montaña there are also used the forms *cuantis más*, *en cuantis que* < *en cuanto que*, and *en cuanti* < *en cuanto*.²⁷ Juan del Encina used the form *cuantes* < *cuanto*.²⁸ All the above forms show one phonetic development in common, the presence of pretonic *i* (*e* in the single case from Juan del Encina) instead of *o*. Gagini, s.v. *continmás*, believes that the origin of *continmás* may be *cuanto y más* used in classic Spanish. There are many examples of *cuanto y más* = *cuanto más* from classic Spanish in Cuervo, *Diccionario* II 658-9, from Cervantes, Lope de Vega, Tirso de Molina, Calderón, Alarcón, etc. In Lope de Rueda we find also a form *cuantis más* as in the modern dialect of La Montaña.

In view of the frequency of the phrase *cuanto y más* in the Spanish of the sixteenth and seventeenth centuries it is quite probable that the

* Continued from LANGUAGE 4.27.

²⁵ Román, *Diccionario de chilenismos*, op. cit., s.v.; Gagini, op. cit., s.v.; and *Studies in New-Mexican Spanish* I §§52, 74.

²⁶ *Studies in New-Mexican Spanish* (see above note); Guillermo Prieto, *Musa callejera*, Mexico, 1883, p. 155; and Cuervo, *Diccionario*, II 657 and 659. The form must have been quite common in the sixteenth and seventeenth centuries but Santa Teresa was apparently the only one of the Classic writers who used it frequently.

²⁷ Duque y Merino, *Contando cuentos y asando castañas*, op. cit. 4, 35; García-Lomas, op. cit. 47.

²⁸ *Teatro Completo*, ed. Real Academia Española, Madrid, 1893, p. 4.

explanation proposed by Gagini is correct, that is, *cuanto y más* gave *cuantimás*. In dialectic Spanish the group *o + i* or *y* usually becomes *oi* or *ui*, and then *ui* frequently develops to *i*. As a matter of fact, however, the change of *o* to *i* in *cuanto más > cuantimás*, if we are to suppose that this is the development and not *cuanto y más > cuantimás*, is parallel to the well-known change of *o* to *i* in such words as *manicorto*, *pechirrojo* from *mano corto*, *pecho rojo*. The only objection to this parallelism lies in the fact that these last changes involve a rather numerous group of noun + adjective compounds that have both *a* and *o* changing to *i*.²⁹

The dialectic form *contimás* from Zamora, Aragón, Mexico, and New Mexico, has furthermore *o* instead of *ua* in the initial syllable. This phenomenon may be explained from the fact that in Old Spanish *ua* and *uo* < Latin accented *ō* were often confused, especially in western Spanish.³⁰ Instead of *uo* (> *ue*) Latin *ō* unaccented gives in Spanish *o*. The alternation of *uo* (or *ua* in dialectic Spanish) and *o* in forms like *nueve-novecientos*, *vuela-volamos* (Old Spanish *nuove*, *nuave-novecientos*, *vuola*, *vuala-volamos*) would naturally influence the development of *ua* in Old Spanish *cuanto* that losing its accent before the accented *más* in *cuanto más* would be naturally confused with *ua* or *uo* derived from Latin accented *ō*. The form *contimás* with *o* instead of *ua* would then be an archaism due to confusion in Old Spanish of *uo*, *ua - o* (< Latin accented *ō* - Latin unaccented *ō*) with *ua* < Latin *ua - o*. The phonetic pattern *uo*, *ua - o* calls for *ua - o*.

11. *dempués*, *dimpués*, *empués*; *depués*, *depué*, *espués*, *dispués*; *endepué*

Each one of the above dialectic forms is used as the equivalent of the modern literary *después*, a form that is also very frequently used in the *Cuentos* from all parts of Spain.

The first three forms, *dempués* *dimpués*, *empués*, are used only in La Montaña. All my examples from the *Cuentos* are from the province of Santander. All three forms are quite common so I will give only a few typical examples: *dempués* 89 ('Arreglaron las hijas la cena pa cenar, y cenaron, y *dempués* de cenar el pobre les dió unos caramelos dormilones . . . Y *dempués* se fueron a dormir y la hija mayor se durmió en seguida.');

dimpués 373 ('Y *dimpués* que le dió el cigarro le dijo que fuera a decile que de cuatro cuartos que tenía que le diera dos. Y Juan Soldao

²⁹ Hanssen, *op. cit.* §423 Menéndez Pidal, *Gramática histórica*. §88.

³⁰ Menéndez Pidal, *Orígenes del Español* §23

le dió las dos partes. Y *dimpués* le dijo a San Pedro que fuera a decile que de un pan que tenía que le diera la metà.'); *empués* 123 ('Y *empués* que salió alcanzó a otro viajero que iba por el mismo camino. '), 371 ('— Hombre, *empués* de todo vamos a darle todo al pobre de Juan Soldao. '), 410 ('Y *empués* fué y cogió y mató a la mujer y la puso encima de una jorca . . .').

García-Lomas also records *dempués*, *dimpués* as common in the popular speech of La Montaña and also a form *impués*.³¹ Duque y Merino records *dempués*, *empués*, *impués* for the same region.³² The three forms above noted for the *Cuentos*, however, *dempués*, *dimpués*, *empués*, are found as far south as Salamanca.³³ None of the above forms are recorded in the Spanish of Andalucía or America to my knowledge, and none are found in Castile outside of the extreme western region of Salamanca.³⁴

The forms *depués*, *depué*, *espués* are all from Andalucía. From the testimony of the *Cuentos* they do not seem to be found in any other part of Spain. The most common form is *depué*. Examples: *depué*, Granada 146 ('—No, que me hace mal si como comida *depué* de come sólo yerba por tanto año. '), Granada 147 ('Y ya *depué* de casao un día se puso ella a espulgar a su marío en la zotea de su casa. '), Sevilla 440 ('*De-pués* que se comía una gallina iba y se probaba en er boquete pa vé si podía comé otra. '), Córdoba 95 ('Y a una mujé que entró a confesarse le dijo er cura *depué* que se había confesao: '), Córdoba 341 ('Y una hora *depué* de nacé le dijo a su mare: '), Córdoba 459 ('Y *depué* viene er tiempo cuando tenemo que trillá,—le dijo er sapo. '); *depués*, Granada 240 ('Quéate viendo por onde yo me voy y me sigues *depués* y llegarás al Castillo de Siete Rayos de Sol, qu' es onde yo vivo. ') Granada 336 ('Conque en esa media *depués* de esperar un rato llegó la serpiente . . .'), Granada 337 ('Güeno, pos ya *depués* de navegar por muchos días . . .'); *espués*, Córdoba 439 ('Y *espués* de uno momento se alevanta er lobo y pillá y se va . . .').

These forms with one or both of the *ss* silent or with aphaeresis of *d*

³¹ *Op. cit.* 43 and 48-9. *Impués* is derived from *dimpués* as *empués* from *dempués* by aphaeresis of *d*.

³² *Contando cuentos y asando castañas, op. cit.* 35, 56, 84, 126, 128.

³³ Lamano y Beneite, *op. cit.* §60 and s.vv. This seems to be the extreme southern limit of the *dempués*, *dimpués* territory. In Ávila to the south I did not record these forms and they do not occur in any of my folk-tales from central and eastern Castile.

³⁴ Cuervo, *Apuntaciones* §374, discusses the forms *empués* and *dempués* but does not say that they are found in Colombian.

are apparently found only in southern Spanish. All must be also frequent in American Spanish but very few of the dialectologists record them.³⁵

The form *dispués*, another form of *después* is found in the *Cuentos* only in the north: Soria 250 ('Y *dispués* le dijo el demonio:'), Ibid. 251 ('Y poco *dispués* salió ella con el anillo en el dedo.'). León 363 ('Y poco *dispués* se fué Pedro a servir con otro amo.'). Santander 426 ('Y *dispués* que comieron y se divertieron bien . . .'). The form is also recorded for Salamanca by Lamano y Beneite.³⁶

The dialectism *endepeué* occurs in a folk-tale from Seville 462 ('—Si me quedrá jugá una mi comae zorra pa quedarse ella con too er montón *endepeué* que yo he hecho too er trabajo.'). This form represents an older *endespués* found today in Mexico, Costa Rica, and Colombia.³⁷

The phonetic history of all the above dialectic forms is of the greatest possible interest. The majority are not modern dialectic developments but Old Spanish forms of independent development from Latin. The modern literary and popular form *después* found today in all the Spanish-speaking world even where the other dialectic forms are found, is derived from Latin *de-ex-post*, and is a form that has been used in Spanish literature since the twelfth century.³⁸ A form *despois* was used in some documents from the west and northwest, for example in the *Fuero Juzgo*. In the *Cid*, *Alexandre*, and other important thirteenth century documents *después* is the regular form.³⁹ In the oldest Spanish, however, *pos* < *post* was also used with the meaning of *después*: '*pos* que penitieret' (*después* que hiciere penitencia) *Glosas Silenses* 44.⁴⁰ In the thirteenth and fourteenth centuries there were also used the forms *depués* (*de*) and *de pos* (*de*) < *de post* (*de*).⁴¹ In Berceo we have also

³⁵ Gagini records *depués* for Costa Rica, and Marxuach *despué* for Porto Rico. Gagini is wrong of course when he states that the evolution of these forms was: *depués* > *dempués* > *después*. Each one of these forms has in Old Spanish an independent origin. The Costa Rican form either represents *de-post*, or is an Andalusian form with silent *s* and derived from *después*.

³⁶ *Op. cit.*, s.v. In Porto Rico there is found a form *dispué*, Marxuach s.v.

³⁷ Ramos y Duarte, *op. cit.*, s.v.; Gagini, *op. cit.*, s.v.; and Cuervo, *Apuntaciones* §374.

³⁸ Cuervo, *Diccionario* II 1164.

³⁹ Menéndez Pidal, *Cantar de Mto Cid*, II §195 and s.v.

⁴⁰ Menéndez Pidal, *Orígenes del Español* §77. In the *Cid* and other texts *pues* is used often for *después*.

⁴¹ Cuervo, *Diccionario* II 1164-5. Berceo used the form, for example in 148c ('Si ante lo sopiessen lo que depués sopieron') and 153d ('Tanto gozarien desso como depués gozaron').

apos < *a post*.⁴² All these forms as well as those mentioned below were used as equivalents of *después* either with or without *de* as pure prepositions or alone as adverbs of time or place. Side by side with these forms, however, there were used also in Old Spanish the originally different forms *empos* < *in post*, commonly used in the *Crónica General*, *Berceo*, etc.,⁴³ *empués* < *in post*, employed by Berceo in *Signos* 10,⁴⁴ and *dempués* < *de in post*, commonly used in popular literature since the sixteenth century.⁴⁵ The Old Spanish form *depués* is recorded in literature as late as the sixteenth century.⁴⁶ It is evidently derived from *de-post*, cf. French *depuis*, Portuguese *depos*, etc. And lastly *endespués* < *in-de-ex-post* is used as a popular Spanish form by the Classic dramatists and later.⁴⁷ As we have already stated all the above forms were originally used as pure prepositions with or without *de*. The adverbial character, however, developed very early and in time some forms developed a purely adverbial character with special meanings such as the modern *en pos de* which has narrowed its meaning to 'after' in the sense of 'seeking for', 'in search of'.

The phonetic development of the dialectic forms of the *Cuentos* is therefore as follows: The northern Spanish forms *dempués*, *dimpués* are derived from *de-in-post*, cf. also Galician *dempois*. The form with *i* instead of *e* here and in *dispués* discussed later is due no doubt to umlaut

⁴² Hanssen, *Gramática histórica de la lengua castellana*, op. cit. §716.

⁴³ Hanssen, *ibid.*; *Gramática y vocabulario de las obras de Gonzalo de Berceo*, Madrid, 1900, s.v.; and Cuervo, *Diccionario*.

⁴⁴ 'El signo empues esti es mucho de temer.'

⁴⁵ Cuervo, *Diccionario* II 1165, gives examples from Moreto and Rojas in the seventeenth century and from Ramón de la Cruz in the eighteenth century. In Ramón de la Cruz, of course, the form is quite frequent.

⁴⁶ Cuervo, *Diccionario*. The form is commonly used by Santa Teresa.

⁴⁷ *Ibid.* There are examples from Climente Sánchez, Lope de Vega and others. In all these cases where classic authors use these dialectic forms they are as a rule put in the mouths of rustics, so that we know they are dialectic forms that never became standard Spanish words. Santa Teresa, however, used Castilian dialectisms as real literary forms. When she lived (1515-84) the Spanish language used by the best writers was still in a period of formation and there were no fixed forms in some cases. By the beginning of the seventeenth century, however, the period of purification was reached with the great dramatists of the Golden Age. It is noteworthy that Covarrubias in his famous *Tesoro de la lengua castellana* of the year 1611 includes very few of the prevailing dialectisms. The period of purification and selection had arrived, and he has for example only *assi*, *después*, and does not even give the forms *ansi*, *depués*, *endespués*, although Santa Teresa who lived a half century before commonly used *depués* and actually preferred *ansi*.

before the accented *ué* that follows. *Empués*, used since early Spanish, is probably derived directly from *in-post*, but any modern dialectic *empués* used in regions where *dempués* is commonly used may also be explained as another form of this with aphaeresis of initial *d*, a very common phenomenon in Spanish dialectology, everywhere.⁴⁸ The form *espués* is merely *después* with aphaeresis of *d* and not an old form. The forms *depués*, *depué*, *endepeú* from our *Cuentos* are probably modern forms because all of them are found only in the south where medial and final *s* are so commonly silent in popular speech. The first two represent the Castilian *después*, and the last represents *endespués*. The form *espués* with aphaeresis of initial *d* also represents *después*. It is true that a form *depués* is found in Spanish literature since the thirteenth century and is used even by Castilian writers, such as Santa Teresa, but to my knowledge this form is no longer found in Castile and the forms without *s* are found only in Andalucía. The form *endepeú* used also only in Andalucía is a modern dialectism derived from *endespués* used by Lope de Vega and others in the classic period and is derived from Latin *in-de-ex-post*. *Dispués* represents *después* with umlaut as explained already for *dimpués* from *dempués*.

12. *espetonar*, *espitonar*

The verb *espetonar* occurs only once, in the form *espetonó* from Zamora. *Espitonar* occurs four times in three forms, *espitonaron*, *espitonó*, *espitonaste*, in a folk-tale from Santander. I quote in full the passages where the forms occur.

1. *espetonó*, 500, lines 31-3: 'Y al levantarse el perro a mear cayó pa abajo encima de los lobos destrozando unas ramas del árbol, y a uno de los lobos se le *espetonó* una jara pol culo.'

2. *espitonaron*, 372, lines 1-4, and 22-4: 'Y entonces Juan Soldao mandó a los peones prender la fragua y calentar los fierros y le quemaron y le *espitonaron* a Judas y por fin le dejaron salir huyendo.' . . . 'Y Juan Soldao mandó a los peones otra vez prender la fragua y calentar los fierros y quemaron y *espitonaron* al diablo como a Judas y al demonio.'

⁴⁸ Examples from the *Cuentos* themselves from various regions of Spain are the following: *ice* 95, *elante* 96, *icia* 112, *esgarraos* 197, *icho* 212, *isperto* 241, 244, *esencanto* 334. The *d* of the preposition *de* is usually silent after a word that ends in a vowel: *guiso e patatas* 97, *con doló e cabeza* 97, *un poco e paja* 110, *el patio e su casa* 112, *en forma e cruz* 149, *un lao e la mesa* 240, *un puñao e sal* 243, *debajo e lo sobaco* 346. With many verb forms it is of course a matter of confusion of prefixes, especially in the case of those that begin with *es-* or *des-*.

3. *espitonó*, 372, lines 12-14: 'Y entonces Juan Soldao mandó a los peones que prendieran la fragua y que calentaran los fierros, y quemó y *espitonó* al demonio lo mismo que a Judas.'

4. *espitonaste*, 372, lines 29-30: 'No te abrimos, que nos quemaste y nos *espitonaste* en un tiempo, y ahora no queremos ni verte.'

My narrator from Zamora explained that *se le espitonó* meant *se le metió*, and that is undoubtedly the correct meaning. It is obvious that in the passage in question it could mean only that or a very similar meaning, such as *se le atravesó*, *se le ensartó*.

As for the forms of *espitionar*, *espitonaron*, *espitonó* and *espitonaste*, we are not quite so sure of the exact meanings. The connection with the verb *quemar* is interesting and important. My narrator from Río Tuerto, Santander, explained that the words mean *picaron*, *picó*, *picaste* or *hirieron*, *hirió*, *heriste*. *Picar* and *herir* would have, of course, almost equivalent meanings, 'to stick', or 'to wound' with a sharp instrument (a hot iron in our passages). But others who heard the folk-tale narrated insisted that *espitonaron* means *le quitaron* or *le arrancaron los pitones o cuernos*, etc. *Espitonar* in that case would mean 'to take away', 'to pull off' or 'cut off the horns' from some animal or demon.

None of these dialectic forms occur in the learned or popular Spanish literature known to me nor do I find them in any of the numerous Spanish dialectical treatises that I have consulted. The forms are either extremely rare or have escaped the attention of dialectologists.

If *espitonar* does actually mean *quitar* or *arrancar los pitones* its formation is very simple. It would be merely a formation from *des+pitón* the verb *despitonar*. The exchange of the prefixes *des-* and *es-*, *ex-* is quite common in Spanish dialectology.⁴⁹ This verb, *despitonar*, with the meaning here indicated is not found in the Academy dictionary or in any other Spanish literature known to me, but my distinguished Madrid colleague Américo Castro tells me that it occurs in popular Spanish.

As for the meanings 'to stick', 'to poke', 'to wound' that may be properly assumed for both *espetonar* and *espitonar* from the testimony of my narrators I may call attention to the following similar forms that do occur in the Academy dictionary and the dialectic Spanish of La Montaña and Salamanca:⁵⁰

⁴⁹ Menéndez Pidal, *Gramática histórica española* §126; *Studies in New-Mexican Spanish* I §189; Cuervo, *Apuntaciones* §917.

⁵⁰ I quote as usual from *Acad.* 15 and from the works of García-Lomas and Lamano y Beneite, many times cited.

Acad. *Espetar*. (De *espeto*.) Atravesar con el asador, u otro instrumento puntiagudo, carne, aves, pescados, etc., para asarlos; atravesar, clavar, meter por un cuerpo un instrumento puntiagudo.

Acad. *Espeto*. (Del germ. *spit*.) Asador.

Acad. *Espitón*. (Aum. de *espeto*.) Hierro largo y delgado; como asador o estoque.

Acad. *Espito*. (De *espita*.) Palo largo

Acad. *Pitón*. Cuerno que empieza a salir a los animales.

La Montaña. *Espitar*. Clavar, prender pinchos o alfileres.

Salamanca. *Espetar*. *Espetellar*. Clavar, colgar, fijar.

Compare also, Portuguese *espetar*, metter, cravar, enfiar no espeto; atravessar, cravar, passar (*Grande Dicionario Portuguez* of Domingos Viera, Porto, 1871-4); Old French *espeter*, attaquer (Godefroy).

The primitive and fundamental word in question is evidently *espeto*. This is certainly derived from a Germanic stem *spit-*, English *spit*, O Saxon *spitu*, German *spiess*, etc. The Spanish *espeto* cannot come from a Gothic *spiuts* as Meyer-Lübke believes (*REW* 8163). It comes directly from Vulgar Latin *espitum* (Germanic *spit-*, as indicated above) a well-known Medieval Latin form (see Du Cange), > Spanish *espeto*, Portuguese *espeto*, French *épois*. In Medieval Latin we have also *spicum* with the meaning *spitum* (Du Cange) and in classic Latin we have *spīca*, *spīcum* and also a form with *ē*, *spēca*, all with the meanings 'ear' (of wheat, etc.), 'spike' (Murray). The fact that the stems *spī-*, *spē-*, *spī-*, appear in these Latin words of similar meanings may account for the fact that in the Romance Languages some forms point to *ī* other forms to *ī* or *ē*. The Spanish forms with *i*, *espitar*, *espitonar* certainly point to a Latin form with *ī*, **spītum*, just as *spīcus*, *spīca*, whereas the forms in *e* may go back to the forms attested in Du Cange, *spītum*, *spīcum* or possibly to a Vulgar Latin **spēta* formed after the pattern of *spēca* attested by Varro (Murray).

How are we to explain the dialectic forms *espetonar*, *espitonar*? The first is undoubtedly a verb derived from *espetón*. In Acad. 15 one of the meanings given for *espetón* aside from *hierro largo y delgado*, 'a long and pointed iron', is *golpe con el espetón*, or a 'blow with the iron rod' in question. The verb formed from *espetón*+*ar*, or *espetonar*₁, would mean then 'to give blows with an iron rod', or if we adhere more closely to the original meaning of *espeto*, *espetón*₁, 'to wound' or 'stick' (with an iron rod or stick of any kind). *Espetonar* would then mean exactly the same thing as *espetar*. It is merely a more intensive form since it is formed from the augmentative *espetón*. This explanation would be entirely

in harmony with the whole meaning of passage 1 given above and with the meaning of the phrase *se le espetonó* as explained by my narrator.

Espitonar, however, may have two entirely different meanings and sources. In view of the different stem vowels noted above in words that have identical or similar meanings, differences that undoubtedly go back to the Latin sources, I believe that the forms *espitar*, *espitonar*, with *i* instead of *e* (we have then *espito* instead of *espeto*) represent original forms with *i*, that is to say a Vulgar Latin **spītum* (cf. Italian *espito*). *Espitonar* would then be merely a variant of *espetonar*. In passages 2, 3, and 4 given above from the Cuentos *espitonaron*, *espitonó*, *espitonaste* would mean then, 'they (he) stuck him (the devil), struck him, or pricked him' (with the iron rods, *fierros calientes*), etc. These meanings make the text clear in both passages and it is with these meanings that my narrator used the words. If however, *espitonar* is taken to mean *despitonar*, 'to take off, cut off, or pull off the horns', *des+pitón* ('horn')+*ar*, then the meaning *espetonar* as explained for passage 1 does not hold. In that case we may have merely a confusion of prefixes, an exchange of *es-* for *des-*. And it is possible that we may be dealing with even a more simple phonetic phenomenon, namely, the disappearance of initial *d*. I am inclined to believe, nevertheless, that *espitonar* is only another form of *espetonar*, with *i* for *e* for the reasons already given.

But whatever may have been the phonetic evolution of the two verbs from their Latin sources their meanings according to all the evidence available are identical. Both verbs probably mean 'to stick', 'to prick', 'to wound', as the narrators explained.

THE PARTS OF THE BODY IN HITTITE

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Sayce has published in *Revue d'Assyriologie* 24. 123-6 (1927), an article on the Hittite names of parts of the body. He gives a numbered list of words, beginning with (1) and ending with (49). At the close he draws a few conclusions, one of which is put as follows:

As it is the names of the bodily members which constitute the most primitive and uncontaminated portion of the vocabulary of a language the list which I have given is of primary importance in determining the philological position of Official Hittite. The overwhelming number of names is Asianic; there are three which are connected with Semitic and 6 and possibly 8 which are borrowed from Indo-European or have themselves been borrowed by Indo-European languages.

There is no doubt that the names of the parts of the body are usually more conservative than some other parts of the vocabulary. If Sayce is right in holding that in Hittite only six or eight such names out of 49 show a resemblance to Indo-European, it seems to follow that these few are loan-words in one direction or the other, and that Hittite is not related to the Indo-European languages. Many who are not in a position to check up Sayce's list will be convinced by so plausible an argument, particularly since it falls in line with the rather exaggerated scepticism with which many Indo-European scholars greeted Hrozný's discovery of the Indo-European affinities of Hittite.

Such an argument, however, is sound only if based upon words whose meaning is fairly certain. It is not enough to know that a word denotes some part of the body; we must know which part before we can hope to find its etymology. Furthermore, we must restrict our attention to precisely this group of words if we are going to argue that this group furnishes particularly cogent evidence of linguistic relationship. Sayce did not take these obvious precautions, and so I conclude that in drawing up his list he was not preparing the way for the argument which I desire to answer, but rather suggesting possible meanings for a more or less random list of Hittite words. Viewed in this light his article is suggestive; but our present business is to answer the argument. If my criticism seems unduly destructive, that is the reason.

In the first place, Sayce's list does not really contain 49 items, since (28) and (29) are lacking. In the second place, a number of words are included that do not belong in a list of parts of the body, whether or not Sayce's translation is correct; namely, (1) *antuhšaš* 'man', (2) *haššiš* 'male'(?), (3) *hanza* 'female'(?), (4) *legan* 'body'(?), (5) *huiš* 'life', (49) *tarpalliš* 'person'. The remaining words require a more detailed examination.

(6) *huešaš* 'the flesh', literally 'the living thing'. No reference is given, and the only word known to me that could come into consideration is the adjective *huiš(u)-*, which is discussed by Sommer and Ehelolf, *Boghazköi-Studien* 10. 20. As is shown there, this word means 'alive, bloody, raw'. It has no place in such a list as ours.

(7) *muwaš* 'breath' is cited from *Keilschrift-Urkunden aus Boghazköi* 1. 85. 16. Since there are only 50 pages in each number of this series, and Sayce usually refers to pages, I assume that he intended *Keilschrifttexte aus Boghazköi* 1. 85. 16 = 1. 51. 2. 16, where the correct reading is *pal-wa-áš*. Weidner, *Studien zur Hethitischen Sprachwissenschaft* 90, has shown that Assyrian *BU.BU.UH.DU*, which stands in the parallel column, is capable of several interpretations. The one which Sayce has chosen may be correct, but it is too uncertain to form a safe basis for etymological study.

(8) *hupallaš* 'skin' is cited from *KUB* 7. 4. 11 = 7. 1. 3. 11. The determinative before the word and the context show that it means 'head' or some part of the head; but that is all we know about it.

(9) *šuppaš*, *šuppiš* certainly means 'ceremonially pure'; see Sommer and Ehelolf, *BoSt.* 10. 7 f., 75. The word also occurs as a noun with the determinative *UZU*. Sommer suggests the meaning 'flesh', but Sayce thinks it is 'fat'. Probably Sommer is right, but the fundamental meaning of the word remains obscure.

(10) *ešhar* 'blood' is quite certain; see Sommer and Ehelolf, *BoSt.* 10. 18. Sayce may be correct also in thinking that the word is the source from which Gk *ἔχρω* was borrowed; but the meaning does not fit very well, and the Greek word differs from the Hittite in both vowels as well as in the inexplicable lack of the sibilant. Sayce seems not to know Friedrich's (Ebert's *Reallexikon der Vorgeschichte* 1. 131) convincing identification of *ešhar* with Gk. *ἐαρ*. Here, of course, the loss of *s* is regular; and it is now fairly certain that Hittite *h* in the interior of a word sometimes represents a sound which was lost in IE; see Sturtevant, *LANGUAGE* 3. 121.

(11) *maniš* 'white blood', properly 'pus', is cited from *KBo.* 1. 85.

18 = 1. 51. 2. 18. The tablet is broken immediately after *ma-ni-iš-* in such a way that another sign belonging to this word almost certainly followed. Weidner, *SHS* 90, reads *maniš[ši]*. The Assyrian column has *ŠAR.KU.* which means 'bright, pure blood'.¹ No doubt Sayce modifies this on account of a notion, which several times crops out in his article, although it is not followed consistently, that Hittite cannot have had two words for the same thing. Beyond question a Hittite word beginning *maniš-* meant 'blood'; but it would be idle to speculate on its etymology until we know the whole word.

(12) *šanezziš* 'spittle' Sayce finds in *KUB* 13. 4. 4. 67, 71. The second of the two passages runs: (71) *ma-a-an-wa-kán DINGIR.MEŠ-áš šá-ne-iz-zi-in zu-u-wa-an KA+U-az* (72) *pa-ra-a an-za-a-áš hu-u-it-ti-ya-u-en*, 'If, then, we have kept the *šanezziš*, the *zuwaš* of the gods away from our mouth'. Sayce understands the borrowed Accadian-Sumerian *zuwan* (i.e. *ZŪ*) as a synonym or gloss on *šanezzin*; if we might grant this, and then might translate *para huwittiyawen* as 'we spewed forth', the meaning given by Sayce would be attractive. It is not likely, however, that a native word would be glossed by a foreign word, and besides *ZŪ* means, not 'spittle', but 'dirt' or 'excrement'.² The meaning of *huwittiya-*, furthermore, has been established as 'close, shut up (a door, a temple)' (see Ehelolf, *Orientalistische Literaturzeitung* 29. 987); and, since *para* means 'forth', the meaning of the phrase must have been 'shut out'. The meaning of *šanezziš* is bound up with that of *zuwan*; if the latter means 'dirt' the former may be 'slime' or the like, while with the meaning 'excrement' we naturally couple 'urine'. The word *šanezziš* is far too uncertain for our purposes.

(13) *tetanuš* 'hair' is almost certainly correct; cf. Friedrich, *Staatsverträge des Hattireiches in Hettitischer Sprache* 1. 35₁. In *KUB* 7. 1. 3. 12 it occurs in a list of parts of the human head, and in *KUB* 13. 3. 25 it occurs in a passage about the duties of workers in hides and leather. The precise meaning of the latter passage I do not understand; but apparently the workman is blamed because the king finds *tetanuš* where it should not be. This, then, is the second word to be inserted in our revised list. It is a reduplicated form of IE **tḡus* 'thin' (Lat. *tenuis*, etc.).

(14) *halanta* is shown to mean 'head' by the vocabulary entry, *KBo.* 1. 42. 2. 11.³ The word is akin to Skt. *bhālam* 'forehead', Gk. *φᾱλός*.

¹ See Bezold, *Babylonisch-Assyrisches Glossar* 286a.

² See Bezold, *Glossar* 110b.

³ Cf. Hrozný, *Sprache der Hithiter* 43; Weidner, *SHS* 113.

λευκός, φαλακρός 'bald'. The head is one part of the body which is notoriously prone to change its name. Most languages have slang words for it; and I suspect that Hittite *halanta* had but recently emerged from that state. It properly meant 'bald head'. An older word for 'head', no doubt, was *haršan*, on which see below, p. 129.

(15) *meniš*, *meneš* 'face' is cited from *KUB* 2. 9. 52. The article should read: *meni* (neut.) 'face', 2*Boghazköi-Texte in Umschrift* 7. 52; *KBo.* 6. 26. 1. 36 f.; cf. Sommer and Ehelolf, *BoSt.* 10. 48. Undoubtedly the word is from the root which appears in IE as **men* 'think'. The original(?) physiological force is preserved in Lat. *mentum* 'chin', Goth. *munps* 'mouth', etc., as well as in Hittite.

(16) *šakwa* 'eyes' (not *šakuwaš* 'eye', as Sayce has it) is well known. I have demonstrated its connection with IE **seqw-* 'see', and have suggested contamination of this root with **oqw-* 'eye' (*LANGUAGE* 3. 163).

(17) *ištamanaš* 'ear' is also generally accepted. It is to be identified with Goth. *stibna*, OHG *stimma* 'voice' from IE **stemnā*, **stemnā*. The corresponding *n*-stem of Gk. *στόμα* 'mouth' yielded a Hittite *r/n*-stem, which is reflected in the phonetic complement of *PI-ar* 'ear' (*KBo.* 1. 53. 8). On initial *st* in Hittite, see *LANGUAGE* 4. 1-6. A similar shift in meaning from 'mouth' to 'ear' by way of 'voice' is possibly to be assumed for Lat. *auris* 'ear' beside *os* 'mouth'; but there is a rival etymology for *auris* and its congeners.

(18) *iššaš* 'mouth' was shown to have that meaning by Friedrich, *Indogermanische Forschungen* 41. 376. I cannot find a satisfactory etymology.

(19) *inaš* 'tooth' is cited from *KUB* 7. 1. 1. 8. The form which occurs there is *inan*, and I think that it is a neuter noun meaning 'colic' or the like. The text begins as follows: (1) *UM.MA* ^{SAL}*A-ya-tar-ša* *GÍM* ^{SAL}*Na-a-ú-i-la ma-a-an DUMU-la-áš* (2) *al-pa-an-za na-áš-ma-áš-ši-kán ga-ra-a-ti-eš a-da-an-te-eš* (3) *nu-uš-ši i-na-na-áš* ^D*UTU-un ki-iš-ša-an ši-pa-an-ta-ah-hi* (4) *ha-an-te-iz-zi-kán UD-ti UDU i-ya-an-ta-an i-na-na-áš* ^D*UTU-i* (5) *ši-pa-an-ta-ah-hi nu ki-iš-ša-an te-eh-hi* (6) *i-na-na-áš* ^D*UTU-i ka-a-ša-at-ta ZÚR.ZÚR pé-eh-hu-un* (7) *nu DUMU-an ku-in hu-uk-ki-iš-ki-mi na-an-kán ŠUM.ŠŪ te-e-mi i-na-na-áš* (8) ^D*UTU-i ki-i-da-ni-wa DUMU-li i-na-an EGIR-an ar-ha kar-áš*. (1) The words of Ayatarša, slave woman of Nawila. If a child (2) is sick, or if *garateš* have been eaten by it, (3) I make libation in his behalf to the sun-god of colic(?) as follows. (4) On the first day I sacrifice by libation to the sun-god of colic(?) a sheep that goes toward

the sun;⁴ (5) and thus I speak: (6) "Behold, to thee, sun-god of colic (?), I have offered a sacrifice. (7) What child I lift up, and speak his name, (8) from him do thou, sun-god of colic(?), remove the colic(?)." Whether or not I have hit upon the right meaning of *inan*, it clearly does not mean 'tooth'.

(20) *adanteš* 'teeth' is cited from the same passage; but it means 'eaten', as elsewhere.

(21) *kuttaniš* 'jaw' is also cited from this inscription (2. 31), and the meaning assumed is due to Sayce's conviction that the text has to do with dentistry. Friedrich, *Zeitschrift für Assyriologie* Neue Folge 2. 275, showed that *kuttani* (the form which occurs here) is dat.-loc. of *kuttar*, and that the meaning is either 'shoulder' or 'neck'. The obvious connection with (31) *kutiaš* 'side' favors the former.

(22) *tititaš* 'nose' seems fairly clear; see Friedrich, *IF* 41. 374.¹ I cannot suggest an IE etymology; but this looks like a nursery word, for which no etymology is necessary.

(23) *huhurtiš* and (24) *pappaššalaš* Sayce translates respectively 'throat' and 'neck' or 'shoulder'. These words stand between ^{UZU}EME 'tongue' and ^{UZU}GAB 'breast' in *KUB* 7. 1. 3. 2 f. and *ib.* 15, while *pappaššalaš* alone stands between 'tongue' and 'breast' in line 23. In the first and third lists our words are grouped with parts of the head, which precede, while in the second list they are grouped with parts of the trunk, which follow. They probably denote some two of the parts that lie between tongue and breast, e.g. chin, neck, throat, gullet, collar-bone, shoulder, arm, upper arm, thorax, etc. Beyond this the evidence will not take us.

(25) *uniniuš* occurs in *KUB* 8. 57. 9, a fragment which seems to give the dimensions of colossal statues. Since it is the length of the *uniniuš* that is specified, Sayce thinks that they are the arms; but fingers, legs, thighs, calves, feet, etc. are equally possible; for the word that gave the unit of measurement is broken away.

(26) The meaning of *kiššar* 'hand' is well established. I briefly discussed its obvious connection with Gk. *χεῖρ* in *LANGUAGE* 3. 121.

(27) *tekkuš* 'fingers'. Sayce says that the meaning is doubtful. He gives no reason for assuming such a meaning, and he doesn't tell where the word occurs. I do not know of such a word.

(30) *hah(ha)ri* is mentioned in *KUB* 7. 1. 3. 4, 16, 24 between ^{UZU}GAB 'breast' and ^{UZU}GAB.GIG 'entrails'(?). Of the many possible

⁴ For a fuller form of this phrase, see *Transactions of the American Philological Association* 58. 12, col. 3, line 12 (1927).

meanings Sayce chooses 'lung' without explanation, except that he compares (23) *huhurtiš*.

(31) *kuttaš* 'side' is correct, as I have shown (*American Journal of Philology* 48. 253), following Sommer and Ehelolf, *BoST.* 10. 41, 53. The word is from ***kmtos* beside ***komt* 'hand', whence Goth. *handus* 'hand', etc., (21) *kuttar* 'shoulder' is a derivative.

(32) *daggalaš* 'breast' is perhaps the most important contribution in Sayce's article, but I almost missed it on account of a wrong reference. In the bilingual text, *KUB* 1. 16. 3. 72 = *2BoTU.* 8. 3. 72, the Hittite version reads *dag-ga-[]*, where the Assyrian version (4.72) has *IR.TI. I.KI* 'your breast'. With this Sayce compares *KBo.* 3. 19. 21 f. = *2BoTU.* 4B. 3. 21 f. (Forrer's supplements): [*nu-u*]-š-ši *me-na-ah-ha-an-da* ^{GIS}N[AD (22) *še-eš-ki*]-ši *nu-uš-ši dag-ga-li-e-š[i]*, 'and opposite him you shall lie on the bed, and give him the breast.' If Forrer's supplements are correct, there can be little doubt that the Hittite word for 'breast' is *daggalaš* or *daggališ*. Sayce would connect this with Eng. *dug*, but the vocalism makes that impossible. I cannot find a satisfactory etymology.

(33) *alel* 'heart' is cited from *KUB* 4. 4. 1. 8. It is clear from Götze's analysis of the passage (*Hattušiliš* 91 f.) that *alel* denotes a part of the summer or a time of year that may be thought of in connection with summer. Sayce's translation is certainly wrong.

(34) *aluleš* occurs in three successive lines in *KUB* 8. 36. 4. 12, 13, 14. I do not understand the passage; but *aluleš* must be a singular noun, since it has to be the subject of the singular verb, *peššiyazzi* 'gives an omen'. It is safe to say, therefore, that Sayce's translation is wrong; he does not tell how he arrived at it.

(35) *takkuwaššaš* 'viscera' is cited from *KUB* 1. 35. 14; but no such word occurs there. In *2BoTU.* 21. 14 f. (p. 35) I find two occurrences of *takku-wa-ššan*, i.e. *takku* 'if' + *wa*, the particle of direct quotation, + the particle *šan*.

(36) *genzu* occurs in *KUB* 7. 1. 3. 5, 17, 24, in such a way that it must designate some part of the abdomen, but which part, I cannot say. Götze, *ZA* 34. 179 f. (1922), has shown on the basis of the bilingual text, *KUB* 1. 16. 2. 18, that *genzu* has also the meaning 'command'; no doubt this comes from the physiological meaning by way of the meaning 'will'. But unfortunately that does not enable us to determine the primary meaning; almost any one of the abdominal organs will serve. I have no idea why Sayce chose to translate 'entrails'.

(37) *legan* 'entrails'. By an ingenious but wholly uncertain restora-

tion of *KBo.* 1. 51. 1. 10, 11, and 2. 11 Sayce gets this meaning. He may be right, but it would be foolish to discuss the etymology of so doubtful a word.

(38) *ulan*, some part of the viscera, and (41) *pantuhaš* 'stomach' occur in the triple list of parts of the body already referred to, *KUB* 7. 1. 3. 6, 18, 25. Both words denote some part of the abdomen, and, since *ulan* occupies the same place in the third list that *pantuhaš* has in the first and second, they are probably synonymous. There is nothing in favor of either meaning given by Sayce; and the IE etymologies which he suggests are improbable on phonetic grounds.

(39) *karpan* 'spleen' is cited from *KBo.* 6. 34. 3. 19, a passage which has been translated by Friedrich in *ZA NF* 1. 166 f. This word is the participle of *karp-* 'raise'!

(40) *šarhuwanza* means 'womb, embryo', not 'the inwards' as Sayce says. I have shown (*LANGUAGE* 3. 112) that it is a compound of the adverb *šar(a)* 'up' and the participle *huwanza* 'growing'. The verb *huwa-* is IE **bheuə-* 'grow, cause to grow, beget'. In this connection Sayce mentions *šarhu* 'heart', without assigning it a number. He refers to *KBo.* 6. 34. 3. 18, but there I find only *šarhuwandan*, the acc. sing. of *šarhuwanza*.

(42) *arraš* 'anus' (not 'rump', as Sayce has it). Friedrich, *IF* 41. 376. pointed out the obvious identity of the word with Gk. *ῥπος*, OHG *ars*, etc. 'anus'.

(43) *tueggaš* 'the generative organs' is cited from *KUB* 7. 1. 1. 31. After a description of a mixture of water with other ingredients, we read: (29) *na-aš-ta DUMU-an a-i-iš-ši-iš pa-ra-a ar-ra-ah-hi EGIR-an-da-ma-aš-ši-kán* (30) *iš-ši-iš-ši la-hu-uh-hi na-at kát-ta pa-aš-zi I. NA ŠAG.DU.ŠŪ-ya-aš-ši-i[s]-šá-an* (31) *la-a-hu-i tu-ú-i-ig-ga-aš-šá-aš-ši-iš-šá-an hu-u-ma-an-ta-aš la-a-hu-i*. 'Then I wash the child's face(?), and again I pour <the mixture?> into his mouth, and he drinks it down. Upon his head she (the nurse?) pours <it>, and upon all his parts(?) she pours <it>.' If *tueggaš* means something more specific than 'parts', one might think of 'features' more naturally than of 'genitals'.

(44) *laluš* 'penis' is said to occur in *KUB* 7. 1. 1. 30; but this line (quoted above) does not contain it. In a vocabulary fragment, *KBo.* 1. 51. 2. 19, 20, we have:

<i>I.ŠÁ.A.RU</i>	la-a-[]
<i>MU.ŠÁ.A.RU</i>	la-a-lu-[]

Weidner, *SHS* 126, supplies and translates: "*lalu[š?]* 'recht, richtig, gerade'."

(45) *gurušbiraš* 'vulva'. Sayce ascribes this interpretation to Zimmern, but without reference. I do not know where the word occurs, or where it has been discussed by Zimmern or any other scholar.

(46) *wallaš* 'leg'. The word occurs in the fragment, *KUB* 7. 13. 2. 16: ^U^Z^U *wa-al-la-áš ha-áš-ta-i za-nu-wa-an-z[i]*, which Sayce translates, 'he(sic!) roasts the legs(?) of the youngling'. He has no better reason for the translation than that there is not 'any other part of the body suitable for a burnt offering of which the Hittite name remains unknown'. Other scholars are less familiar with the Hittite vocabulary.

(47) *kalulupaš* is shown by *KUB* 13. 2. 2. 6, 8 to be a unit of measurement. In the vocabulary fragment, *KBo.* 1. 51. 2. 10, we have in the Hittite column: *GĪR-ás ka-lu-lu-p[a-]* (The other columns are broken away.) It seems to follow that our word denotes some part of the foot (not 'foot', as Sayce thinks); and the easiest way of reconciling the two passages is to assume the double meaning of Lat. *digitus*, as Forrer apparently does (*Zeitschrift der Deutschen Morgenländischen Gesellschaft* 76. 254). Then the vocabulary entry will mean 'pedis digitus'. I cannot think of a satisfactory etymology.

(48) *genu* 'knee'. This meaning is quite certain; see especially Friedrich, *IF* 41. 372-6 and Sommer and Ehelolf, *BoSt.* 10. 72 f. The etymological connection with Lat. *genu*, etc., is obvious.

To Sayce's list we must add *haršan* 'head', whose relationship with IE **bhareš* 'point, tip' I discussed in *LANGUAGE* 3. 120, and *kardiaš* (gen.), *kardi* (dat.-loc.) 'heart',⁵ which is evidently the same word as Gk. *καρδία*. This gives us a total of eighteen well authenticated Hittite words for parts of the body, of which fourteen have satisfactory IE etymologies.

⁵ See Hrozný, *Journal of the Society for Oriental Research* 6. 69₁; Götze, *ZA* 34. 183; Zimmern, *Streitberg-Festgabe* 439.

BOOK REVIEWS

Festschrift Meinhof. Sprachwissenschaftliche und andere Studien. Pp. xii + 514. Hamburg: L. Friedrichsen & Co., 1927.

Fifty scholars of many countries have contributed the papers which make up this volume in honor of the distinguished Africanist, Dr. C. Meinhof of Hamburg, on the occasion of his seventieth birthday. We take pleasure in noting that the President of the Linguistic Society of America was a member of the committee in charge of the project.

Of the fifty papers, thirty are concerned with the languages of Africa, sixteen deal with other languages, four are of a more general nature. One can, in reviewing, do little more than note some of the papers which attract his attention; other papers will be equally valuable, or more so, to other scholars.

The late MAURICE DELAFOSSE of Paris writes (29-44) on 'Classes Nominales en Wolof', showing that the nominal classes are still to be recognized, and giving precise data upon their appearance. They are however tending to disappear, which has prevented scholars from recognizing their existence in Wolof, until quite recently, and this is the first detailed account of them. The importance of this demonstration for the kinship of Wolof is obvious.

ALICE WERNER of London writes (45-54) on 'A Traditional Poem attributed to Liongo Fumo, with some notes on his legend.' Liongo was an East African chieftain and poet, traditionally of Persian descent, and apparently belonging to the thirteenth century. His ballads are still handed down by word of mouth, which enabled Miss Werner to record them, and she visited also the mound which is reputed to be his tomb. One of his ballads is here given, in the original and in English, in parallel columns.

P. HERM. NEKES PSM (Limburg on the Lahn) contributes (301-12) a study 'Zur Entwicklung der Jaunde-Sprache unter dem Einfluss der Europäischen Kultur', giving a general account of great interest, and then a list of English, German, Portuguese and Spanish words and their borrowed forms not only in Jaunde, but in neighboring dialects. Jaunde is a language of the Cameroons, in West Africa, and borrowed words pertaining to religion, to trade, and to the household; from German also

a derivative of *marschieren*. I note from the examples that Jaunde alone of the several dialects uses *l* to represent an antevocalic *r* of the foreign word.

E. M. VON HORNBOSTEL (Berlin), writing (329-48) on 'Laut und Sinn', seeks to show the inner connection between sense and sound, arguing that for primitive speakers 'Sprache ist tönender Sinn'. He gives rich collections of examples from Indo-European, Semitic, and African languages, and reaches the conclusion that the vowels are less significant for the sense than are the consonants.

PIERO MERIGGI (Hamburg) treats (416-24) an ever recurring theme in 'Il Problema della Parentela dell' Indoeuropeo col Semitico', showing parallel developments in the two linguistic groups, but admitting that other groups also must be drawn in for comparison before final conclusions can be drawn. Along with this article one may call attention to that (146-73) of ALFREDO TROMBETTI (Bologna), 'Le Lingue dei Papua e gl'Idiomi dell'Africa', with a collection of lexical similarities between Papuan dialects on the one hand, and African dialects on the other; the number of dialects cited is astounding, and invalidates the conclusions, since such a procedure lacks scientific precision.

A brief article (444-8) by A. MEILLET (Paris), 'Sur le Degré de Précision qu'admet la Définition de la Parenté Linguistique', has, like many a short article of the same scholar, a value out of proportion to its length. After commenting upon the nature of the Indo-European speech-unity and the proofs of it, which he considers quite adequate, he comments upon the difference in the nature of the Semitic speech-unity, in that Egyptian shows in part a relationship with Semitic, and on the other hand with the Berber languages. He finds that the criteria for language relationship may vary in value with different groups, because of features inherent in the languages themselves. He concludes with a warning word to those who seek to find greater linguistic unities than those of the groups just mentioned, that in such comparisons complete groups must be compared, and not parts of groups: if there is a Semitic-Hamitic language-group, then not primitive Semitic, but primitive Semitic-Hamitic must be correlated with primitive Indo-European, and so on.

ERNST CASSIRER (Hamburg) writes (507-14) on 'Die Bedeutung des Sprachproblems für die Entstehung der neueren Philosophie', which the reviewer passes by regretfully, to chronicle four contributions by members of the LINGUISTIC SOCIETY of AMERICA: 'Die Ausdrücke für einige religiöse Begriffe der Kwakiutl-Indianer' (386-92), by FRANZ

Boas; 'The Word-Stems of Central Algonquian' (393-402), by LEONARD BLOOMFIELD; 'Fox Linguistic Notes' (403-8), by TRUMAN MICHELSON; and 'Zur Sprache der Filipinen: Die "Kasus" des Tagalog' (409-15), by OTTO SCHEERER (Manila). Every scholar in linguistics can find in this volume numerous articles of interest and of value to him in the wider aspects of the subject.

ROLAND G. KENT

Geschichte der Sprachwissenschaft bis zum Ausgang des 19. Jahrhunderts; Kurzgefasste Darstellung der Hauptpunkte. By VILHELM THOMSEN. Translated by HANS POLLAK. Pp. 101. Halle (Saale): Max Niemeyer Verlag, 1927.

This book grew out of a lecture that was one of a series intended to serve as an introduction to Linguistic Science. The hand of the master is visible throughout, and so it is no surprise that even a quarter of a century after its first appearance it should be chosen for translation. It is one of the first books that the beginner in Linguistics should read, and we must all be grateful to the scholar who has turned it into a language more widely known than Danish. His work makes the impression of having been done excellently.

G. M. B.

The Aryans: a Study of Indo-European Origins. Pp. 221. By V. GORDON CHILDE. New York: Alfred A. Knopf, 1926.

On a fly leaf following the preface, the sub-title of this work is changed to 'New Light on Indo-European Origins'—an ambitious claim that is hardly fulfilled in the sequel. Starting out, in praiseworthy manner, to correlate the findings of archaeology and linguistics as touching the pre-ethnic Indo-Europeans, the author in the end only reverts to the South Russian hypothesis proposed so long ago as 1862 by Latham (165), and so recently as 1919 by Schrader (183), or, at most, and that somewhat half-heartedly, reverses the order of events in the Germanist theory, see 198, 182, and cf. 188: 'The view here advocated would be that a section of the proto-Nordic stock, concentrated on the Pontic steppe, developed there the neolithic civilisation of the ochre-graves and then diffused it to Central Europe'. For Childe admits (179) that the 'Germanist doctrine is the most comprehensive and consistent synthesis of Indo-European peoples that has ever been offered.' And so, after working through 200 pages of mainly archaeological speculation and argument the reader at last wearily reaches the following incon-

clusive conclusion: 'The present writer still thinks that the South Russian hypothesis, outlined in the preceding pages, may prove to be tenable; his confidence in it has, however, been shaken since he espoused it—with reservations—in an earlier work¹ by the appearance of the new articles by Kozłowski and Tallgren. In default of this, only the Germanist theory is left. The ochre-grave folk will still be Aryans, but not the Aryans'. Surely the reader has every right to be told all this at the beginning, in the first chapter if not in the preface, and then to be left to decide for himself whether it is worth his while to continue to read further.

The theory has, as Childe amply recognizes (198ff.) serious chronological difficulties, but these he thinks surmountable. Giles' Danubian theory, which the reviewer regards as in many ways attractive, is rejected mainly on the ground that the Danubian society appears to have been a peace loving, unwarlike, peasant community, not likely to spread to distant countries and impose its language upon the people living there. This is not only an argument *ex silentio*: is it not also inconsistent with Childe's novel view (84) that 'the state of things observed among many of the cow-keeping tribes of the Sudan and other parts of Africa approximates most closely to the primitive Aryan economy'? Bender's Lithuanian theory is also rejected, this on the ground that material remains of suitable neolithic character are wanting in this area.

It will already have been observed that *The Aryans* is concerned largely with the problem of determining the original centre of diffusion of the Indo-European languages. Other questions, such as the character of the civilisation of the early IE speaking peoples, the cause and date of their dispersal, the routes over which they traveled, their own racial and ethnic connections, and those of the peoples amongst whom they spread their tongue, are all treated as contributory to the one great question, where was their first home?

The linguistic evidence bearing on this question is given scant consideration. It is dismissed in a matter of 16 pages; the documentary evidence is completely ignored. The chief value of the work, therefore, lies in its careful and up-to-date discussion of the various archaeological possibilities side by side with a painstaking presentation of the relevant evidence. It is a useful supplement to, but it does not supersede, Hirt's *Indogermanen*. The avowed purpose (chapter I) of correlating the linguistic and archaeological evidence is not really carried out, and

¹ Childe, *Dawn of European Civilisation*.

the book, as it proceeds, loses balance, and becomes more and more an archaeological treatment of a problem which is not purely, nor even mainly archaeological. The author is an archaeologist who is obsessed with the limitations of the linguistic method (79), if, indeed, as does not appear, his acquaintance with the linguistic material is really complete, or based upon first-hand study. It still remains open, therefore, to some daring scholar to combine, if he can, the two disciplines of archaeology and linguistics in order to solve the riddle of Indo-European origins.

Childe examines in some detail the several theories which have been proposed of the original home, concluding (158) that the available data converge upon 'the great plain of North and East Europe', where he supposes the true Nordic type to have been evolved. For him the dominant factor of European pre-history from 2500 B.C. onwards is 'the victorious expansion of the Nordic culture', and since he finds the reasons for calling the Nordics 'Aryans' conclusive, and the nuclei of cultural groups traceable in history as 'Aryan' to be of Nordic origin wherever Nordic movements can be followed in detail (200 ff.), the expansion of the pre-ethnic Indo-Europeans is held to have begun about 2500 B.C. (78), the advance guard of the Indo-Iranians to have reached the north-eastern frontier of Mesopotamia some five or six hundred years later (41); in Europe the proto-Hellenes emerged as such about 2300 B.C. (60), and by the fourteenth century B.C. there were Indo-European speaking Hellenes in the Aegean (45). This last date is, of course, based on the Hittite monuments, and will doubtless now be universally accepted, although those few who maintained it twenty years ago were ridiculed. But to assign, as Childe does, a lower limit of date (1500 B.C. is his choice, see 78, 95) for the differentiation of *centum* and *satem* dialects² is both arbitrary and unnecessary. Apparently he does not really consider the sibilisation of original palatals a late innovation in the derived languages as Sturtevant (LANGUAGE 2.25) holds, comparing the Romance tongues (not a true parallel, since there the change is not universal, but conditioned by the character of the following vowel), nor does he show any knowledge of Bloomfield's arguments (AJP 32.36) for the lateness of the change in Sanskrit, but regards it as a line of dialectal cleavage in the parent tongue.

A concluding chapter is devoted to the rôle of the 'Aryans' in history. We have seen that Childe identifies the Aryan and the Nordic stocks,

² Why, by the way, does Childe (22) consider Phrygian a *centum* speech? See, on the other side, Hirt, *Idg.* 2. 594.

which rather looks like a confusion of language and race; in fact he even speaks (101) of an 'Aryan' race, an expression that is hardly to be justified, although, since from the linguistic evidence we can construct a consistent picture of a homogeneous IE spiritual and material culture, we may rightly speak of an 'Aryan' nation (see, most recently on the distinction, Ernest Barker, *National Character* 221, 1927, quoting Meillet as regards the pre-ethnic Indo-Europeans). But he is no slave to the "Nordic Myth". Indeed he strangely writes (164) that 'the neglect and discredit into which the study of IE philology has fallen in England are very largely attributable to a legitimate reaction against the extravagances of Houston Stewart Chamberlain and his ilk', an extraordinary statement which only betrays Childe's ignorance of the true state of the case, and in his final chapter he certainly underestimates the superiority of the Nordic stock: if, as he says (211f.), the 'Aryans' possessed a more (*sic*) excellent language, it must be not only that the language generated a superior mentality (this he would grant), but also that it sprang from, was generated by, a superior mentality—the evolution of the language and of the mentality must have been coincident, the one stimulating and stimulated by the other. But the superior capacity for development is the essential starting point. Childe's scepticism is all the more astonishing because he agrees that while a Nordic or 'Aryan' intrusion into Mediterranean and other areas of older and often more advanced civilisations usually was followed by a decline, yet the decline was only temporary and the new civilisation which arose on the ruins of the old marked a genuine advance: in short (211), 'the Aryans do appear everywhere as promoters of true progress and in Europe their expansion marks the moment when the prehistory of our continent begins to diverge from that of Africa or the Pacific.' If this does not imply a more vigorous mentality, what does it mean? As Ridgeway saw long ago, the Nordics brought with them a severer feeling and a higher moral life, which more and more penetrated the culture and civilisation which they found in the Mediterranean.

It is indeed interesting to note in passing how some older theories which were scorned when first propounded are being justified by the discovery of new evidence, as Ridgeway's assumption of an Achæan period or his insistence that Indo-European speaking Hellenes were living in Greece before the last millenium B.C., or again that the short-headed Alpines were not intruders or invaders from Asia Minor. And if the Danubians, regarded by Giles as the authors of pre-ethnic Indo-

European speech and civilisation, belonged to the Mediterranean race (128), yet another of Ridgeway's theories receives confirmation.

It has already been indicated that Childe's subject has proved too wide for satisfactory treatment by the method which he has adopted. How far his guidance in matters archaeological is to be depended upon is a question that may be left to the experts in that subject. But it is difficult for a reader who has attempted to combine the results of archaeological and linguistic research in one small corner of the wide field over which Childe has chosen to roam to feel confidence in him as a guide, not merely on points of language but also in archaeology or even where he only seeks to re-state views expressed in other works. Take, for example, the part of his book dealing with Italy (67ff.). Here we are baldly told that both Siculi and Ligures were non-Indo-European, and no hint is given of the large body of (as I hold) convincing evidence to the contrary that has been accumulated. In opposition to Childe's assertion (67) it cannot be too strongly emphasized that (in Conway's words, *Camb. Anc. Hist.* 4.461) 'in our oldest linguistic sources, such as the names of places and rivers, there is no form in ancient Italy, from the Alps to its southernmost point, which cannot be counted justifiably as either IE or Etruscan.' On page 70 Picenum is described as an Oscan region, in what sense I cannot guess: for archaeologically, as Randall MacIver has shown, the region is quite distinct, and linguistically there is no evidence to decide the point. On the same page the Oscans are called the kindred of the Umbrians: *kindred* must refer to *race*, but all the evidence is against making the 'Oscans' kinsmen of the Umbrians, and here *dialect* is no criterion of race. Nor is it admitted, as Childe seems to think (74), that the *Shakalasha* repulsed by Merneptah are Sicilians—the very authority whom he cites for his view in fact prefers a different one. Ridgeway certainly held that the *terramaricoli* were ancestors of at least one part of the later *populus Romanus*, yet he is credited by Childe with having taken the opposite view. Again the vigorous contradiction (147s) of Myres' attribution of the early inhumation graves of Switzerland to the lake-dwelling people is at least inconsistent with the statement (155) that no positive assertion can be made about the prevailing funerary rite of the early Swiss lake-dwellers; for if that be so, Myres may just as well be right as not. And has not Childe in general been too content to give us summaries (not always, as may be judged from these specimens, accurate in matters of detail) of older works, and not stayed to make a close independent study of the material for himself? This question rises

inevitably in the mind of the reader who notes that, on the one hand, Childe accepts unreservedly theories open to severe criticism (e.g. Harland's account of the grouping of the Greek dialects, *Harv. Class. Stud.* 34. 1923, on which see Buck, *Cl. Phil.* 21.1ff., 1926), on the other cites without hesitation a theory apparently unaware of subsequent modifications made by the scholar who earlier sponsored it (e.g., on the linguistic connexions of the *-nt-* suffix, see now *Glotta* 14.84 ff., 1925). We meet once more (when shall we not?) the stock archaeological assumption that the Mediterranean area was 'Aryanised' late (129, 139). The truth is no more and no less than that our *evidence* as to the language is (as yet) late: but we have no justification whatever for assuming what its character would be if it reached back one or two thousand years more than it does.

That precision in detail which is the first requirement made of a scholarly work is sometimes to seek in Childe's book. Many illustrations³ of this could be cited, but it is enough to record the general impression that the book was written and published in a hurry⁴.

J. WHATMOUGH

A Modern English Grammar on Historical Principles. Part III, Syntax, Second Volume. Pp. ix + 415. By OTTO JESPERSEN. Heidelberg: Carl Winters Universitaetsbuchhandlung, 1927.

There is nothing in the domain of philology more stimulating than a new volume by Professor Jespersen. To the present reviewer he has been a constant inspiration for many years and still is one of the great ones in this field. For many years he has been out on the confines of our knowledge fighting to extend its boundaries into the great unknown. The new volume brings us many more valuable contributions. At a few points, however, the present reviewer has divergent views. These he desires to discuss here.

On the very first page of the new volume Professor Jespersen arouses our opposition. He is speaking of the grammatical character of *here* in such expressions as 'leave *here*' and 'from *here*.' He insists that *here* in these expressions should not be grammatically termed a substantive, although he admits that it is the semantic equivalent of a substantive.

³ Editorial ruling has denied space for a list of such, numbering over thirty items.

⁴ In this review 'Aryan' is used, as by the author, in the sense of 'Indo-European'; but the term 'Aryan' ought to be abandoned altogether.

He desires us to call *here* in these expressions a 'principal,' maintaining that it is not a substantive because it has not 'the formal characteristics of substantives.' Professor Jespersen is very fond of adding new grammatical terms to our terminology. He here employs 'principal' as a term for a word that has the function of a substantive but not its form. He explains his position more fully in vol. II, p. 5. Here he says that *poor* is an adjective in 'the *poor* people', but a principal in 'the *poor*.' Knowing that many regard *the poor* as a substantive, he then remarks that we should not call *the poor* a substantive, for it does not have the formal characteristic of substantives. He terms, however, *the blacks* a substantive, because it has, as he puts it, the formal characteristic of a substantive in that it takes in the plural the plural ending *s*. The great Danish scholar forgets that many English substantives do not end in *-s* in the plural. In many substantives we carefully avoid the *s* plural, as in 'a load of *fish*,' 'a string of *perch*,' etc. In this plural without *-s* there is often a collective idea. It seems quite clear that *the poor* is a real substantive and belongs to this class of substantives. Although it is a real substantive, we do not add *-s* in the plural because we desire to give expression to the collective idea. Thus the plural *-s* is not the only characteristic of a substantive, so that we should be careful in classifying substantives on the basis of form. But *the poor* is a substantive not alone on the basis of its form and meaning. It is a substantive also on the basis of its function. It can be used wherever a substantive can be used.

It seems perfectly clear to the reviewer that function is the true test of the grammatical character of an English word. Thus *warm* is an adjective in 'a *warm* fire', but is a verb in 'I *warm* my hands at the fire'. In Old English every adjective used as a verb had the form of a verb. Present-day English is of a much simpler type. Very much less importance is now attached to form. We still have a few distinctive forms and endings, but we employ as few as possible, for we feel that the function of words usually makes our thought clear. Function is now the dominant force in English, not form. Now let us turn to *here* in 'leave *here*' and 'from *here*'. It seems perfectly clear that *here* in these expressions is a substantive, the object of the verb *leave* in the one instance and the object of the preposition *from* in the other. Of course, it was originally an adverb and usually is still, but it is occasionally used as a substantive, as in these examples. Function determines its character.

On p. 23 of the new volume we find the perplexing heading 'Content Clauses'. We read the following paragraph and discover that in 'I

believe *that he is ill*' the words *that he is ill* form a 'content clause'. Again we find a new name for an old familiar grammatical category. We usually call such a clause a 'substantive clause,' or in still simpler language a 'noun clause'. But Professor Jespersen tells us we must not call such a clause a 'noun clause' because it hasn't the formal characteristics of a noun. In the light of the present tendency to disregard form and trust to function it seems perfectly plain to the reviewer that the function, not the form, determines the character of the clause. It would be a great loss to replace the term 'noun clause' by 'content clause'.

On pp. 9 and 10 of the new volume Professor Jespersen calls *sing* in 'He can *sing*', 'He must *sing*', 'He may *sing*', 'He shall *sing*', 'He will *sing*', a principal, the object of the verbs *can*, *must*, *may*, *shall*, *will*. He has in mind only the origin of the construction and seems oblivious of the mighty changes that in the course of many centuries have taken place. Once *can*, *must*, *may*, *shall*, *will*, were verbs that could express time as well as modal relations. Today their past tense forms *could*, *must*, *might*, *should*, *would* cannot point to past time without the help of a context which clearly points to the past, i.e. they have no forms which can of themselves point to the past. They do not now have the distinctive forms of verbs, and yet Professor Jespersen calls them verbs. He is usually a warm defender of form, claiming that it determines the character of words. The present function of these words often clearly reveals them as mere particles that color the thought much as the subjunctive endings in oldest English and in Latin. We do not know the history of the old Latin subjunctive endings, but they were probably once independent words like *can*, *must*, *may*, *shall*, *will*. Today we still write *can*, *must*, *may*, *shall*, *will* as independent words in accordance with their original force, but they have evidently become mere coloring particles with subjunctive meaning. In the second and third persons *will* in connection with a verb often serves as a particle to indicate future time: He *will* sing. Thus all these so-called verbs are in fact no longer verbs, but are mere particles that are associated with a real verb to color its thought, or in the case of *will* to indicate future time. To the reviewer it seems that Professor Jespersen has failed to grasp the real meaning of these changes.

The reviewer is not in sympathy with Professor Jespersen's treatment of our English cases. He has abandoned the old historic names *nominative*, *genitive*, *dative*, *accusative* on insufficient grounds. In spite of the great changes in the inflection of modern English the Old English *nominative*, *genitive*, *dative*, *accusative* functions are well preserved, and the

old names should be retained. In *Publications of the Modern Language Association* 42. 238-54, Professor Morgan Callaway has ably defended the use of these old terms in English grammar. On p. 278 of his new volume Professor Jespersen says: 'There is not the slightest ground for speaking of a dative as separate from the accusative in modern English'. His language is strong, but it is quite evident that the actual facts are against him. In Old English the function of the dative was to express the idea of advantage or disadvantage or the idea of personal reference. In this older period it was still thought advisable to indicate this function by a distinct form. Similarly, the accusative function had a definite meaning, but was often given also a distinct form. In modern English we often feel that the function alone is enough to distinguish dative and accusative. In 'They chose *him* a wife' *him* is a dative, while in 'They chose *him* king' *him* is an accusative. The function is here the sole criterion for the dative and the accusative relations. English is here at its simplest. Form disappears entirely. The function is here the only criterion for both the dative and accusative relations, and yet it is an effective, tho simple, means of expression. Its simplicity is in harmony with the simple structure of our language. Professor Jespersen's failure to recognize function as a characteristic English criterion is the weakness of his position. He has simply overlooked an important fact of the language.

Now comes a curious bit of thinking. After saying that the dative cannot be distinguished from the accusative on account of the lack of a distinguishing criterion Professor Jespersen says that the old dative and accusative categories are now represented by the indirect and the direct object. Without giving us a criterion for his indirect object he gives us many illustrative examples of its use. These examples correspond accurately to the old dative categories of *dative of interest*, *dative of personal reference*, and the *ethical dative*. Altho he does not give a criterion for his indirect object, it becomes clear from his examples that function is the sole criterion for this category. Similarly, for some of his examples of the direct object function is the sole criterion. Altho there is often no formal distinction between the direct object and the indirect object, he recognizes them as distinct categories, but he says that the dative and the accusative must not be recognized as distinct because there is no formal distinction. He does not see that in demonstrating that the direct and the indirect object are distinct categories he proves that the old dative and accusative are still distinct.

In this study of the cases there is another important point where the

views of the writer differ from those of Professor Jespersen. In the following five paragraphs the writer desires to describe an interesting development in our language from his own point of view. Professor Jespersen has quite a different explanation. Both views will be presented in the course of the account.

In Old English when the dative had a distinctive form it normally stood before the direct object when the latter was a noun. It still keeps its old position altho it has lost its old distinctive form: 'I gave *him* a book.' 'He bought the *boys* a car.' In the absence of a distinctive form here the function is the chief criterion for the dative, but also its old distinctive position is felt as a criterion, for, whenever it becomes desirable to put it in another position, we always think it advisable to employ some device to mark it clearly as a dative. The old prepositions *to* and *for*, which often have the same meanings as the simple dative, suggest themselves as appropriate means to mark the form as a clear dative: 'He gave the book *to me*, not *to you*.' 'He bought the car *for me* as well as *for you*.' The forms *to* and *for*, tho originally prepositions, are here now felt as dative signs. This point is further discussed in the course of the next paragraph.

In Old English, the dative normally followed the direct object when both forms were personal pronouns. It still keeps its old position here altho it has lost its old distinctive form: 'Show it *me*' (Pinero, *Sweet Lavender*, Act II). In America it is more common to employ here the new dative with *to*: 'Show it *to me*.' It seems self-evident here that *to me* is a dative, not a prepositional phrase. It corresponds faithfully to the British simple dative *me*. Moreover, we find in American English the old simple dative alongside of the new dative with *to*: 'I give it *to you*' or 'I give it *you*' (Oemler, *Slippy McGee*, Ch. V). In this position we have two dative forms, the older simple dative and the new dative with *to*. The new dative is the result of our desire to give the dative a more distinctive form. In America the old simple dative is now common only before a noun used as direct object: I gave *you* a book. Elsewhere we feel that the dative should have a distinctive form.

There is a tendency to employ the dative sign *for* for advantage and the dative sign *on* for disadvantage: 'She is making a new coat *for her little son*.' 'He shut the door *on me*' (in older English *to me* or the simple dative). This new differentiation is not yet observed consistently, for in accordance with older usage *for* is still often used for disadvantage: 'He is setting a trap *for you*.' The dative sign *on* is widely used in popu-

lar speech for disadvantage, but in the literary language is restricted to certain expressions.

The new dative forms are historically connected with the old simple dative, having been called forth by the desire for a clearer dative form and by the desire for a more accurate expression of the dative function. The accompanying *to*, *for*, or *on*, originally prepositions, are today as much a part of our modern dative as the old dative ending was a part of the Old English dative. We do not have a clear idea of what the Old English dative ending originally meant. It will probably always lie hidden from us in the shadows of the unknown past. But here before our very eyes we see old prepositions crystalizing into case signs. We see, in the present, a thing going on that has been going on in all ages of the past. To bring out an idea more fully and accurately the mind often creates a new form of expression by the use of old available materials. Here the old available materials are the old prepositions *to*, *for*, *on*, which have been converted into dative signs.

But Professor Jespersen maintains that they are not dative signs but genuine prepositions in the usual sense. On p. 292 he tries to prove this. He says that the form with *to*, as prepositional phrases in general, is more loosely connected than a real indirect object. This is not true. There is no difference in meaning between 'give it *me*' and 'give it *to me*'. The first expression is more common in England, the second more common in America, but there is no difference in the meaning. They are both dative forms. The only serious evidence that Professor Jespersen has brought forward to support his claim is the statement (p. 292) that the present position of the new dative is that of a prepositional phrase. Often the new dative stands in the same position as the Old English inflected simple dative: 'Give it *to me*.' '*To them* there is nothing lacking that the heart could desire.' Thus the new dative often corresponds to the old simple dative and has nothing of the nature of a prepositional phrase. On the other hand, it now often stands, like a prepositional phrase, after a noun or pronoun which is the direct object of the verb: 'She is making a dress *for her daughter*.' *To*, *for*, *on* were originally prepositions, and it is quite natural that they still, like prepositions, follow a direct object of the verb. Something of the older life of words often clings to them in their new life. The components of the present perfect tense, as in *has written*, were once separate words with entirely different functions and could be separated by other words. Altho they are now felt as the constituent elements of a tense form, they can still be separated by other words: 'He *has* often under the pressure

of business *written* letters until midnight.' Similarly, the new dative still often has the position of a prepositional phrase, but it no longer has the inner nature of a prepositional phrase. It is completely identical in meaning and grammatical force with the simple dative and can be replaced by a simple dative: 'She is making a dress *for her daughter*,' or 'she is making *her daughter* a dress.' The only difference here between the two expressions is that the new dative with *for* expresses the idea of advantage more clearly. But Professor Jespersen says on p. 291 that things that have the same meaning are not always grammatically the same. That the new dative is grammatically the same as the old simple dative is proved by the fact that in translating Old English into modern English we often render an Old English simple dative by our modern dative with *to*, *for*, or *on*.

The reviewer now turns to what interests him most in Professor Jespersen's new volume—his treatment of relative pronouns. For many years the reviewer has been trying to penetrate into the darkness that surrounds the origin of the English relative pronouns. Hence Professor Jespersen's treatment of this subject had a great interest for him. This new treatise on relative pronouns fairly bristles with fine observations, but at a few points Professor Jespersen still clings to views that seem to the reviewer untenable, in spite of his adoption of them and their wide currency at the present time. An attempt will now be made to place these things in a different light.

In oldest English, *who* (OE *hwā*) had two meanings—the interrogative *who*, corresponding closely to the modern interrogative *who*, and the indefinite *who*, which had the meanings 'anyone', 'someone', 'somebody', 'one'. The corresponding Latin word *quis* had the same double meaning, showing that this double meaning is very old. As the common element to both meanings is the idea of indefiniteness, it seems quite probable that the interrogative *who* developed out of indefinite *who*. An interrogative is an intensive indefinite indicating that the indefiniteness has impressed the mind so strongly that an intellectual reaction has set in which has demanded an explanation. This demand for an answer is contained in the peculiar tone characteristic of the interrogative form of expression. The old indefinite *who* out of which the interrogative *who* developed is not so common today as it once was, for in older English it gradually developed definite force, referring back to a definite antecedent, thus becoming a definite relative pronoun: the man *who* is sitting behind us. But the old indefinite *who* still lives on in noun clauses: 'Who goes light travels fast.' 'I did not see *whom* he struck.' Professor Jespersen

along with many other scholars calls *whom* in the last example an interrogative pronoun, but the present writer holds it to be the old indefinite *who*. The speaker here says that he saw someone struck but that he was unable to determine his identity. Similarly in 'I do not know *who* struck him' the speaker says that he is not informed as to the identity of the person who did the striking. The meaning of *whom* and *who* in these two sentences is indefinite, but neither of the words asks for information, nor is in any way associated with a question. In 'I asked him *whom* he struck' *whom* is evidently an interrogative, for it is only the indirect form of 'Whom did you strike?' An interrogative is always an indefinite, but an indefinite is not always an interrogative. The indefinite *who* cannot be an interrogative when it has nothing to do with a question. Sometimes even in a question *who* is not an interrogative but an indefinite, for it merely refers to an unidentified person without asking for an identification: 'You passed me on the street and spoke to me. Did you not notice *who* was with me?' The person represented here by *who* has not been identified but was known both to the speaker and the person addressed. Hence the speaker does not ask for identification. He only asks the gentleman addressed whether he has noticed the unidentified person, thus merely referring to him without asking for an identification.

The indefinite pronoun *which* is used in noun clauses in the same way as indefinite *who*. The difference in the two forms lies in their meaning. *Who* is a general indefinite, while *which* indicates that the idea of indefiniteness is confined to a few individuals within a definite group. It differs also in that it may refer to persons or things. Professor Jespersen on p. 64, says that *which* here does not refer to persons. This is an oversight. A few examples will illustrate the use of indefinite *which*: 'I think both of the girls would dance with you. You may select *which* of them you like.' 'The two boys are equally bright. . . I don't know *which* of them is more promising.' 'I like all three cars. I don't know *which* of them I shall choose.'

On p. 80 Professor Jespersen speaks of the relative pronouns that have a definite antecedent, as in 'the man *who* sits behind us; the book *which* lies upon the table'. He remarks here: 'In ME the interrogative pronouns *who*, *whom* and *which* came into use as relative pronouns.' This is an exceedingly weighty statement without any accompanying proof. The reviewer cannot accept such a view without a full presentation of the evidence. Many others have expressed the same opinion as Professor Jespersen. Indeed, this seems to be the common view.

Professor Jespersen may have adopted it without a personal investigation. As far as the reviewer knows, no earnest scientific attempt has ever been made to establish the truth of this position. It has always been simply taken for granted. The reviewer has been studying the question for many years, and is convinced that the common definite relatives *who* and *which* have developed out of the indefinites *who* and *which*. He believes that he has reliable evidence to establish this claim. In due time the materials that he has gathered will be presented to scholars in proper form.

On p. 81 Professor Jespersen treats the asyndetic relative clause, i.e. the relative clause that has no introductory connective, as in 'the book *I hold in my hand*'. He here gives this clause the expressive name of 'contact-clause.' On p. 132 he explains his new term: 'These clauses are here termed contact-clauses because what characterizes them is the close contact between the antecedent and the clause.' In Chapter VII, pp. 132-53, he discusses the origin, nature, and present use of this clause. At the close of the chapter he criticizes the grammatical views expressed on this clause by the reviewer in his *College English Grammar*. As Professor Jespersen's views about the relative clause in general differ somewhat from those of the reviewer, and as the differences involve points of considerable importance, the reviewer feels called to defend his positions by giving a brief but careful account of the development of our relative clauses as he sees it from the materials that he has gathered.

The asyndetic relative construction, or the 'contact' relative construction as Professor Jespersen calls it, originally consisted of two independent sentences lying side by side. This older order of things can still be seen in such a sentence as 'There are people *he dislikes*.' In this sentence however, the second clause 'he dislikes' is no longer independent. It is evidently subordinated to the first clause 'There are people'. If the two clauses were independent in at least a formal sense the form would be: 'There are people, he dislikes them.' By the dropping of the personal pronoun *them* in the second clause we are led to look back to the preceding clause for the connection. This suppression of the personal pronoun *them* here is an old form of subordination. In this early period when the asyndetic relative clause was developing there arose a desire for a still more accurate expression of the grammatical relations at this point. In the oldest period of English and German a demonstrative, or, as it is called technically, a determinative was employed in the principal proposition to point like an index finger to the following explanatory clause. We still often employ this old concrete form of expres-

sion: 'I want these books and *those you hold in your hand*', originally 'these books and *those: you hold [them] in your hand*'. Here *those* stands in the principal clause pointing to the following explanatory clause and thus binding the two clauses together. The definite article is similarly used: '*the book I hold in my hand*', originally '*the book: I hold [it] in my hand*'. In these examples the subordination of the explanatory clause is indicated not only by the suppression of the personal pronoun in the clause but also by the determinative—*those* in the first example and *the* in the second. The determinative stands in the principal clause pointing to the following explanatory clause and thus binding the two clauses together. To the writer it seems self-evident that the determinative in this construction was originally felt as a device to bind the two clauses together. Even today we feel the binding force of the determinative. It is an interesting survival of the old concrete manner of expressing grammatical relations. Professor Jespersen disputes the binding force of the determinative here. On p. 153 he remarks: 'I must criticize his (Curme's) grammatical views when he says that in "Here is *the book you lent me*" *the* is a connective which binds the clause to the principal proposition (but what about "There are people he dislikes" in which, at any rate, there is no connective?).' Professor Jespersen does not see that in 'There are people he dislikes' *the* cannot be used before *people* because the reference is indefinite. In older English when there was a desire to employ the determinative construction for indefinite reference, the determinative was placed after the noun: *Ic sylfa cuthe sumne brother, thone ic wolde thæt ic naefre ne cuthe* (King Alfred, *Boethius*, 634, 7), originally 'I myself knew a certain brother, *that one*: I would that I had never known [him]? We now say: 'I myself knew a certain brother *that* I would that I had never known.' The construction was originally determinative, it is now relative. This becomes evident when the antecedent is a plural: 'I myself know two brothers *that* I would that I had never known.' If the construction were still determinative the form would be *those*, not *that*. The determinative *that* has a plural form, but the relative pronoun is invariable. The determinative that stood after the noun has been drawn into the explanatory clause following it and has become a part of it, now serving as its introductory relative pronoun. A radical change has taken place here. The old determinative that used to stand after the antecedent stood in the principal clause pointing to the following dependent explanatory clause binding it to the antecedent. In the new relative construction the relative pronoun stands at the head of the dependent clause binding it to the antecedent.

It can be seen from the preceding paragraph that the determinative could once stand either before or after a noun. The old construction with the determinative before the noun has been preserved: '*the book I hold in my hand*'; '*that book you hold in your hands*'; '*those books you hold in your hands*'. The old determinative construction is also well preserved with pronominal *that* and *those*; '*this book and that you hold in your hand*'; '*these books and those you hold in your hand*'. In these examples the determinative still stands, as originally, in the principal proposition. It cannot by the very nature of the construction be drawn into the subordinate clause, and hence has been preserved. The determinative that once stood after the noun was more common than the determinatives *the*, *that*, *those* that stood before the noun, for it could be used for definite or indefinite reference, while the determinatives that stood before the noun could only be used for definite reference. The once common determinative that stood after the noun has developed uniformly into a relative pronoun, so that as a determinative it has entirely disappeared.

Often instead of '*the book I hold in my hand*' we say '*the book that I hold in my hand*'. We now construe *that* here as a relative pronoun, but originally it was a determinative, as has been explained above. Hence there were often formerly two determinatives here, one before the noun and one after it. This was probably often mere excess of expression in harmony with doubleness of expression found elsewhere in older English, as in the common use of two negatives when one was sufficient. Once there doubtless lay back of the doubleness of expression the desire to make thought and feeling clearer or to convey greater emphasis. But in course of time the two types became merely two forms of saying the same thing, or often perhaps a little shade of difference was felt. The single determinative was felt as colloquial, the double determinative as literary. The single determinative was not common in Old English. Professor Jespersen even believes that it was not used at all in Old English with all the characteristics that distinguish it today. This, however, is not true. From the materials that the writer has collected it becomes perfectly clear that it was used with every characteristic that it has today. It did not occur often in the literary language because it did not seem to be a true relative construction to those who were familiar with Latin. Literary men employed almost regularly the double determinative construction because the second determinative seemed to correspond to the Latin relative pronoun. Moreover, the second determinative was developing into a real relative pronoun and was often felt as a relative

pronoun. In the present literary language the new relative construction is the normal form, but the old simple determinative construction is not infrequent. It is often a very convenient form where the connection is close and even in choice language it is not a stranger. There is an elegant simplicity about it that makes it a favorite in any style where simplicity is needed. But there is nothing more certain than that the old construction is receding. It is now not much used in the literary language where the relative pronoun, if expressed, would be in the nominative relation. In older English it was common here: 'I have a neece is a merchants wife' (Ben Jonson, *Every Man out of his Humour*, I, II). It now survives here only in dialect. It is still common in the mountains of Kentucky: 'Any man *can't* fight for his friends [had] better be dead' (Lucy Furman, *Mothering on Perilous*, Ch. XV). In reading these two examples illustrating older literary and current dialectic usage we find it a little difficult at first to catch the meaning. The old construction here seems foreign to the literary feeling of today.

The second determinative in the double determinative construction described above was usually *that*, but also other forms were used. Especially interesting is the use of *so* here to point as a second determinative to a following explanatory clause. It only survives here in the form of *as* (from *all so*): 'Read *such* books *as* may benefit you,' originally 'Read *such* books, *so*: (= they ought to be *so*;) [*they*] *may* benefit you.' Notice that the personal pronoun in the subordinate clause is omitted as in all the determinative examples given above. Of course, we now construe *as* as a relative pronoun. The *as*, which originally belonged to the principal proposition, has been drawn into the subordinate clause, and has become a relative pronoun.

The personal pronoun in the subordinate clause of the determinative construction is not always suppressed, as in the examples of determinative constructions given above. It is often needed to make the thought, clear, especially in the genitive relation: 'Name me a profest poet *that* his poetry did ever afford him so much as a competencie' (Ben Jonson *Poetaster*, I, II, 90, A. D. 1602). This old construction has passed away in the literary language, but it survives in popular speech: 'There's two fellows *that* their dads are millionaires' (Sinclair Lewis, *Babbitt*, Ch. II, I). But this construction was not limited in older English to the genitive relation. It was almost common in descriptive style where the dependent clause was not closely attached to the principal proposition 'A knight ther was and that a worthy man, *That* (= such a one) fro the tyme that he first began To ryden out, *he* loved chivalrye' (Chaucer,

Prolog, I, 43). The old construction is still common in popular speech: 'The road from Nice to Monte Carlo is called the Grand Corniche, *which* I don't know what *it* means' (Ring Lardner, *The Riviera*).

The present writer has merely touched here upon a very large subject. He has only desired to call attention to the fact that our relative clauses were originally explanatory clauses following a determinative, or, with double expression, two determinatives. The old loose paratactic construction with its concrete picture of a pointing finger or two pointing fingers has in large measure yielded to a much less concrete construction, which is now void of pictures but is simple and accurate. Some of our great masters still had a feeling for the old form and the common people still feel it. These changes in the English language form an interesting chapter in the story of the intellectual struggles of the English people for a simpler expression of its thought.

On p. 80 Professor Jespersen remarks about the definite relatives *who* and *which*: 'In early Modern English *that* is the favorite relative *Who* and *which* reminded scholars of the Latin pronouns and came to be looked upon as more refined or dignified.' To the reviewer there seems to be another, much more important, factor here. The present wide use of *who* and *which* at the expense of *that* represents a remarkable improvement in English expression. As *who* originally referred only to living beings while *which* originally referred to both living beings and lifeless things, *who* gradually became a favorite when the reference was to living beings. The growing use of *who* for living beings gradually restricted the employment of *which* to use with lifeless things. Earlier in the present period *who* was employed for reference to animals: 'I noticed a solitary robin, *who* (now usually *that*) looked as if *he* needed to have *his* services to the Babes in the woods speedily requited' (Thoreau, *Journal*, I, p. 21). *Who* is now usually employed to indicate personality: 'The last child *which* was born', but 'our only child, *who* is now in college'. *Which* now indicates lack of personality or lifelessness. In Old English, the relative pronoun in spite of its wealth of form was not able to indicate life or lifelessness.

On p. 123 Professor Jespersen criticizes the following statement in *College English Grammar*, p. 182: 'We often find *which* after a single noun denoting a person, but *it* here expresses the idea of estate, rank, dignity, not the lack of personality: He is not the man *which* his father wants him to be.' He remarks: 'But the reason for the use of *which* is simply this that the relative is a predicative, and predicatives in English, as in many other languages, are felt to be neuter, as shown by the use of

it and *what*: the quality, not the person, is thought of.' The reviewer has read this passage several times, but he does not quite know whether he understands it. Professor Jespersen seems to mean that this *which* can be used only in the predicate. In his notebook the reviewer has instances of this *which* in all the grammatical relations: 'Most of the critics have been very kind. I only saw one *which* (nominative) was not' (Sir Henry Jones, *Letter*, May 29, 1919). 'He is exactly the man *which* (object) such an education was likely to form' (Trollope, *The Warden*, Ch. II). The reviewer has a large number of such examples. It is quite evident that this *which* is not confined to the predicate relation.

The reviewer has called attention to a few points where he disagrees with Professor Jespersen. Some of them are very difficult questions, especially those dealing with the origin of the relative constructions. The reviewer has presented his divergent views in detail in the hope that he might stir up an earnest scientific controversy that might lead to positive results. The reviewer himself is burning to know more about some of these things. If it were not for this, he would have used most of his time and space to tell how much he has enjoyed this book. He feels personally very grateful for the large number of valuable quotations from our English and American authors and still more grateful for the bracing thought that has started trains of new thought. Few linguists have given of themselves more fully than Professor Jespersen. The greatest thing that a mortal can do is to give of himself freely. In reading Professor Jespersen's book the reviewer often thought of H. W. Fowler, probably on account of the great contrast in character and mind. Mr. Fowler's *Modern English Usage* sometimes provokes opposition on account of the narrow field that he has chosen for his investigations. He usually limits his observation to the English of the present time. But he too has given of himself very fully. The one has sharp eyes for the genesis of things, the other sharp ears for preciseness and appropriateness of expression.

GEORGE O. CURME

The Teaching of the English Language. Pp. 187. By CHARLES CARPENTER FRIES. New York: Thomas Nelson and Sons, 1927.

Fries has undertaken the task of familiarizing the teacher of English with the results of modern scientific investigation of language and of laying down the lines along which instruction in the English language should be changed.

Showing first how our common school grammars with their arbitrary

'dont's' perpetuate the point of view of the narrow-minded purism of the 18th century with its arrogant claim that 'even our most approved authors offend against every part of grammar' (26), the author stresses the need for 'a grammar that records the facts of the actual usage of those who are carrying on the affairs of English-speaking people and does not falsify the account in accord with a make-believe standard of "school-mastered" speech; a grammar that explains these facts in the light of their history, not by means of an *a priori* reasoning; and finally, a grammar that attempts to set forth the patterns or tendencies that have shown themselves in the drift of the English language' (44).

The chapters on 'Acceptable Grammar', 'Acceptable Pronunciation', and 'Acceptable Vocabulary' contain a simple and effective exposition of the old puristic and the new scientific point of view. The following chapters deal with the problems of the teacher of English in the light of the modern view of the nature and function of language.

If it is the chief task of the teacher of English to build up speech habits, what particular habits of speech are desirable? First and foremost, the author argues, those of the 'conversational English' of the particular section in which the student lives, as 'it is clearly not the business of the schools in any one of these sections to teach the language habits which constitute the dialect of another section, for the speech practices of the Middle West are just as good as those of New England, and the Southerners have long been justly proud of their dialect' (127). The acquisition of the written and the literary forms of the language comes second. This is sound common sense.

Fries would have the teacher of English acquire a knowledge of phonetics, for 'in matters of pronunciation a teacher without knowledge of phonetics is as useless as a physician who knows no anatomy' (177); he would have him acquire 'enough familiarity with the older stages of the language and the processes of sound-change and analogy that have operated in its development to understand the nature of the difficulties arising in connection with the forms and syntax used by pupils' (182); and he would demand of him a familiarity with the modern scientific view of the nature and function of language. These are surely moderate demands. But how many teachers of English, even in our colleges, have such training? And how many universities are equipped to offer such training? The author's university is one of the few.

However, there is in increasingly wider circles a sound revolt against the arbitrary dicta of dictionary and school grammar and a new interest in linguistic matters. It is to be hoped that this readable volume with

its clear exposition of the issues will contribute its share towards a reshaping of instruction in the English language.

Ample references to the literature on the English language and on general linguistics are a valuable feature of the book. The author's forthcoming 'Introduction to Modern English Grammar' will be of interest to all who would like to see the teaching of English reorganized.

HANS KURATH

Die Bibel als Ariadenfaden im Labyrinth der Sprachen: eine Probefchrift für Forscher aller humanistischen Gebiete. Pp. xvii + 136. By ZEKHARIA SCHAPIRA. Selbstverlag der Verfassers: Z. Schapira, Tel-Aviv, Tabor str., Erez-Jisraël, Palästina, 1927.

The author of this volume believes that the key to the origin of language is in the Bible, and that Hebrew presents the word-roots in their simplest forms. His examples are drawn from the Semitic and from the better known Indo-European languages. Samples of his learning are seen in his interpretation of German *verstehen* as a corruption of *verstecken* (89); in the reference of English *bachelor* to Hebrew *bāḥēl* (93); in the grouping together of English *cede*, *sedate*, *sedulity* (94) as derivatives of one root which is found in Hebrew. Misprints are common; *homo alalus* becomes *alallus* or *allalus*. Many short vowels in Latin words bear the circumflex to show that they are long, which they are not.

One wonders when the pre-scientific attitude toward linguistics will come to an end; when would-be scholars can be restrained from spending their own and their friends' money on the printing of worse than useless treatises. In this entire treatise there is but one citation of a modern work on linguistics; the author seems neither to know nor to care whether a science of linguistics already exists. He calls upon the *Lichtsucher* to join with him in his research and to aid him with funds for publication; but let us pray that Linguistic Science may be spared.

ROLAND G. KENT

NOTES AND PERSONALIA

THE LINGUISTIC INSTITUTE, through its announcements, evoked such a response that the Administrative Committee went ahead with the plans, arranging definitely with the Yale Corporation for the use of the facilities of Yale University. The lectures will begin on July 9, and will last for six weeks. Those who are planning to attend, and have not yet registered their names, are requested to aid the Director by informing him as soon as possible, in care of the Linguistic Institute, Box 1849, Yale Station, New Haven, Connecticut.

THE FIFTH ANNUAL MEETING of the Linguistic Society will be held in New York City, in the week following Christmas Day, 1928, in conjunction with the annual convention of the American Association for the Advancement of Science. The American Anthropological Association and the American Psychological Association also are meeting in New York at that time, and it is hoped that the mutual interests of these associations and of the Linguistic Society will be manifested in the attendance at the sessions. The exact days and place of the sessions of the Linguistic Society have not yet been fixed.

ACCEPTANCES OF ELECTION have been received from the three foreign scholars who were elected to honorary membership at the Cincinnati meeting. It is to be noted that Professor Sommer is no longer at the University of Bonn, but has accepted a call to the University of Munich. We make the following extracts from the letters of acceptance:

Die ernennung zum ehrenmitglied der Linguistic Society of America freut und ehrt mich in besonderem masse und ich spreche Ihnen dafür meinen wärmsten dank aus. Ich sehe darin vor allem die gleichstellung der romanischen sprachwissenschaft mit den anderen, was ja auch in den artikeln Ihrer zeitschrift zum ausdruck kommt, was aber im allgemeinen sehr selten geschieht. So nehme ich denn die ehrung mehr noch für mein fach als für mich persönlich in empfang und betrachte sie als ein zeugniss dafür, dass, was ich aus innerem triebe, den mir von der natur gegebenen neigungen folgend, geleistet habe, der sache zum grossen nutzen gereicht hat. . . . W. Meyer-Lübke.

Ihr Brief vom 19. Januar, der mir die Nachricht von meiner Erwählung zum Ehrenmitglied der Linguistic Society of America brachte, war für mich eine grosse

Ueberraschung: eine um so grössere, da ich ja eigentlich den mehr linguistischen Arbeiten meiner Jugendjahre immer ferner getreten bin. Aber schliesslich darf ich mir vielleicht doch einbilden, dass auch die Dinge die ich jetzt treibe und wohl auch bis zu meinem nach der Natur der Dinge nicht mehr allzufernem Ende treiben werde, doch auch der Linguistik einigermaßen zu Gute kommen: so dass ich also die Wahl mit gutem Gewissen, und jedenfalls mit allen guten Vorsätzen für die Zukunft annehmen kann. Darf ich Sie bitten, das der Gesellschaft mitzuteilen, und ihr zugleich meinen ergebensten Dank für die mir zuteilgewordene Auszeichnung zu übermitteln. . . . E. Sievers.

Ihr freundliches Schreiben vom 14. I. 1928 ist erst heute in meine Hände gelangt, da ich inzwischen als Professor von Bonn nach München übergesiedelt bin. Der Linguistic Society of America spreche ich meinen herzlichsten Dank aus für die grosse Ehre, die sie mir durch meine Wahl zum Ehrenmitglied hat zuteilwerden lassen, und ich nehme diese Ehre mit Freuden an. . . . F. Sommer

Acting under the authority granted by the Society at the Annual Meeting in Cincinnati, the President and the Secretary appointed and issued credentials to the following members of the Society, as delegates to the various European Congresses in which the participation of the Linguistic Society had been invited:

To the Conference on Linguistic Bibliography, Paris, March 12: E. B. Babcock, W. A. Oldfather.

To the First International Congress of Linguists, The Hague, April 10 to 15: Franz Boas, W. A. Oldfather.

To the First International Etruscan Congress, Florence and Bologna, April 27 to May 3: J. W. Hewitt, D. M. Robinson.

To the Seventeenth International Congress of Orientalists, Oxford, August 27 to September 3: H. H. Bender, W. N. Brown, A. R. Nykl. W. A. Oldfather.

Brief accounts of these meetings will be given in later issues of LANGUAGE.

The Twenty-Second International Congress of Americanists will be held in New York City during the week beginning September 17, 1928. The Committee of Organization has the following officers: Franz Boas, Chairman; P. E. Goddard, Secretary.

Professor E. C. Armstrong has been unable to serve on the Committee of the Linguistic Society to seek a subvention of \$10,000 for certain publications, and Professor Leonard Bloomfield has succeeded to the chairmanship, with Professor Edward Prokosch as his associate on the Committee.

Dr. W. Norman Brown, Professor of Sanskrit at the University of Pennsylvania, has been appointed to a fellowship on the John Simon Guggenheim Memorial Foundation, for the fifteen months from June 1, 1928. He will make a study of the legends and history centering around the Jaina sage Kālaka, as preserved in Sanskrit and Prakrit texts, of the texts themselves, and of the art of the paintings illustrating certain manuscripts of those texts. His studies will be pursued mostly in India, but also for a short time in Europe.

Professor Carl D. Buck has been added to the Honorary Committee of the First International Congress of Linguists, at the Hague.

Professor Aurelio M. Espinosa, of the Leland Stanford Jr. University, has been elected to the presidency of the American Association of Teachers of Spanish.

Miss Marie W. Smith, graduate student in Indo-European Philology at the University of Pennsylvania, has been appointed Instructor in Latin at Temple University, Philadelphia, from September of this year.

Dr. Ralph Marcus, Instructor in Semitic Languages and Lecturer on Hellenistic Judaism in the Jewish Institute of Religion in New York City, was also Lecturer in Semitic Languages at Columbia University during the spring semester of 1928.

Dr. Edward Sapir, until recently Associate Professor of Anthropology at the University of Chicago, has been promoted to be Professor of Anthropology and General Linguistics.

The Committee on Publications has accepted, as the second number of the LANGUAGE DISSERTATIONS, the dissertation of Edward Yoder, Professor of Classics at Goshen College, Goshen, Indiana, on 'The Position of Possessive and Demonstrative Adjectives in the *Noctes Atticae* of Aulus Gellius', which he is offering for the Ph.D. degree at the University of Pennsylvania. Several other numbers of this series are under consideration, and announcement of their acceptance is expected shortly.

Subsequent to the last published list of new members, and up to March 25, the following new members have been received into the Linguistic Society:

Prof. F. C. Edwards, Univ. of Louisville, Louisville, Ky. (Germanic and Romance Langs.)

Mr. Leopold L. Meyer, Foley Bros. Dry Goods Co., Houston, Texas.
(President of the National Retail Credit Assn.)

Miss Mary Saleski, Stephanstr. 20 II, Leipzig, Germany.

Prof. Frederick Tupper, Univ. of Vermont, Burlington, Vt. (English)

Stuart N. Wolfenden, Esq., 620 Alpine Drive, Beverly Hills, Calif.
(Tibeto-Burman Langs.)

BOOKS RECEIVED

Under this heading will be acknowledged such works as seem to bear on 'the advancement of the scientific study of language'.

The publicity thus given is regarded as a full return for the presentation of the work. Under no circumstances is it possible to comply with the requests being made by certain publishers for the return of books not reviewed quickly.

Reviews will be published as circumstances permit. Copies of them will be sent to the publishers of the works reviewed; and it is hoped that they will then send a second copy to replace the one which will have become the property of the reviewer.

For further bibliographic information consult the annual list of Exchanges.

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Giessener Beiträge zur deutschen Philologie. Die Entwicklung von Lessings Briefstil. Pp. 32. By WILLI METZGER.—*Beiträge zur Laut- und Formenlehre der Mainzer Mundart.* Pp. 67. By ANNI PFEIFER. Giessen: 1926.

Giessen Doctoral Dissertations. Annaeanae quaestiones scaenicae. Pp. 28. By JOS. HIPPLER.—*Das Beiseitesprechen im älteren englischen Drama bis Shakespeare.* Pp. 22. By GOTTFRIED BELL.—*Beiträge zur Sprache Aventins.* Pp. 58. By RICHARD JOCHEM.—*Friedrich Heinrich Jacobi und die Frühromantik.* Pp. 38. By THEODOR BOSSERT.—*Das Jugendproblem bei Henrik Ibsen.* Pp. 58. By HELLMUTH WOLFGANG MÜLLER.—*Der Kraftmeier im deutschen Drama bis zum Sturm und Drang.* Pp. 56. By KAROLINE URSTADT.—*Die Moderne Tierdichtung.* Pp. 58. By JULIUS ZEUCH.—*Das Sotaverfahren in 4. Mose 5, 11-31 in der tannaitischen Literatur.* Abstract: pp. 14. By NACHUM WAHRMANN.—*Studien zum Dialog im Drama Lessings und Schillers.* Pp. 102. By HANS SCHUCHMANN.—*Der Wechsel zwischen Poesie und Prosa im Drama Ludwig Tiecks.* Abstract: pp. 11. By KARL DUX.—Giessen: 1924-7.

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ORIGINAL *h* IN HITTITE AND THE MEDIO-PASSIVE IN *r*

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I have tried to show (LANGUAGE 3. 109-22) that Hittite *h* occurs where the Indo-European languages have *bh* initial, and I can now make two or three additions to the material there presented. In LANGUAGE 4. 122 f. I have connected *halanta* 'head' with Greek φαλός·λευκός, φαλακρός 'bald', and Sanskrit *bhālam* 'forehead', on the assumption that the original meaning of the Hittite word was 'bald'. Hittite *haš-*, *hašk-* 'open',¹ must be identified with IE **bhosos* 'naked', whence Lithuanian *bāsas* 'bare-foot', Old English *bær*, etc. The verb *pihiš-*, which, accompanied by the adverb *arha*, means 'strike off, cut off, take off' or the like,² contains the verbal prefix *pe-*, while *hiš-* is an extension in *s* of the root which appears in IE **bhei-* 'strike' (Old High German *bīhal* 'axe', etc.),³ and whose extended form **bheid-* means 'split' (Sanskrit *bhinadmi*, Latin *findo*, etc). Another instance of *h* = *bh* after the verbal prefix *pe-* is *pehar(k)-* 'hold towards' (*Keilschrifttexte aus Boghazköi* 4. 2. 2. 25, *Keilschrift-Urkunden aus Boghazköi* 13. 4. 4. 37) beside *har(k)-* 'have' on which see LANGUAGE 3. 117 f.

The only Hittite word in which I can find IE *bh* medial is *nepiš* 'sky', which must be Greek νέφος, Skt. *nabhas* 'cloud'. This alone would be too narrow a basis upon which to erect a phonetic law; but there is some further reason for thinking that Pre-Indo-European medial *bh* did in fact yield the Hittite sound which is written either *b* or *p*. For that would harmonize with the development of the other aspirates into the corresponding Hittite stops (*dh* > *t/d*, *gh* and *gh* > *k/g*, *gh* > *ku/gu*). Examples of these changes were given in LANGUAGE 3. 121, except for the development of *gh*. This last is illustrated by *gimmanza* 'winter',⁴ beside Gk. χεῖμα, Skt. *hemantas* 'winter', etc.

¹ See Ehelolf, *Kleinasiatische Forschungen*, 1. 141, (1927).

² See Sturtevant, *Transactions of the American Philological Association* 58. 19 (1927).

³ See Walde-Pokorny, *Vergleichendes Wörterbuch der Indogermanischen Sprachen* 2. 137 f.

⁴ See Sommer, *Boghazköi-Studien* 4. 18-23.

Nevertheless medial *h* is very common in Hittite words, a considerable number of which have obvious IE etymologies. Since, however, there is nothing in the IE cognates to correspond to the Hittite *h*, we must conclude either that the *h* is a Hittite innovation or that the IE languages have here lost a sound which Hittite has preserved. The second alternative is certainly to be preferred, since Hittite medial *h* stands in such various surroundings that it would be impossible to define any conditions under which it could have been developed.

Medial *h* follows a consonant in *ešhar* 'blood',⁵ which is the same word as Gk. *ἔαρ*, Skt. *asṛk* 'blood'. The genitive *ešnaš* indicates that *h* was lost between consonants in Hittite.

Parallel with the pair *ešhar*: *ἔαρ* stands *tešhaš* 'dream': *θεός* 'god'. That the Gk. word has lost intervocalic *s* is shown by *θεσφατος* 'spoken by a god' and several other compounds. Some scholars connect *θεός* with MHG *getwās* 'ghost', Lith. *dvėsti* 'breathe', etc.; but Bartholomae (*Wochenschrift für Klassische Philologie* 17. 677—1900) was right in maintaining that some trace of an original *θ_f* would surely have survived. Even those who assume that *θεός* is from **θ_fesos* may be willing to connect our Hittite word with Lat. *fānum* (<**fas-nom*), Oscan *ffisnū* 'temple' (**fēs-no-*), Lat. *fēriae* 'festival', and Armenian *dikh* 'gods' (IE **dhēses*).

The verb *išhuwa-* 'throw, scatter, shoot (an arrow)'⁷ stands in a parallel relationship with Gk. *ίός* 'arrow', except that the Gk. word has gone over to the *o*-declension. The original *u*-stem survives in Skt. *iṣuṣ* 'arrow'. We shall presently (163) find another Hittite word which preserves original *h* after *s*.

The group *lh* appears in *walh-* 'strike', which I have connected (LANGUAGE 3. 220) with Gk. *βάλλω* 'hit, throw' (Arcadian *ἐσδέλλοντες*) on the basis of PIE **g^helh-*, **g^hl^hh-*. The Hittite word is almost identical in meaning with *βάλλω* in its most primitive force, as in *Il.* 16. 806 f.:

ὄπιθεν δὲ μετάρρενον ὄξει δούρι

ῶμων μεσσηγὺς σχεδόθεν βάλε Δάρδανος ἀνήρ,

'and from the rear a Dardanian hero hit his back between the shoulders with his sharp spear'.

⁵ See Sommer and Ehelolf, *BoSt.* 10. 18. The etymology was proposed by Ehelolf, Ebert's *Reallexikon der Vorgeschichte* 1. 131.

⁶ See Friedrich, *Indogermanische Forschungen* 43. 258₄ (1926).

⁷ See Sommer and Ehelolf, *BoSt.* 10. 53; Götze, *Hattušiliš* 103 f. The etymology was suggested by Kretschmer, *KF* 1. 10 (1927), but with hesitation that I cannot understand. At the same time Kretschmer identified *išhiya-* 'bind with Skt. *syati*, *sināti* 'bind.' In this he may well be right, but I am not yet ready to give up my (LANGUAGE 3. 221) connection of the Skt. word with Hittite *šai* 'he puts on, seals.'

Hittite *tarh-* (*tar-ah-zi*, *tar-hu-du*, etc.) 'conquer'⁸ belongs to PIE ***ter-* 'tremble, cause to tremble, flee, put to flight'. In the IE languages the root usually shows a final *s*, as in Lat. *terreo* 'frighten' (< **tersejō*), Gk. *τρέω* 'flee' (< **tresō*); but *s* is lacking in Skt. *taralas* 'trembling', and with a different root-determinative we have Gk. *τρέμω*, Lat. *tremo* 'tremble', etc. Approximately the Hittite meaning appears in Umbrian *tusetu* 'fugato'. The other meaning of the Hittite verb. 'be able', must have grown out of the meaning 'conquer'.⁹

As *tarh-* is to IE **ter-*, so is *parh-* 'drive out, banish; drive hard, speed'¹⁰ to IE **per-* 'pass through, carry through', whence Gk. *πείρω* 'pierce', Lat. *porto* 'carry', Goth. *faran*, OE *ferian* 'travel'.

Medial *h* appears before *s* in *tuhš-* 'separate, part, end',¹¹ which I would connect with Gk. *δέομαι*, *δένομαι* 'be lacking' (< **δενσομαι*), Skt. *doṣas* 'defect', *duṣyati* 'he spoils', etc.

Hittite *pahš-* 'protect'¹² must be somehow related to IE **pō(i)-* 'protect' (Skt. *pā*), on which see Walde-Pokorny, *VWIS* 2. 72. The *s* is no doubt the same formative element which appears in many IE and Hittite verb stems and tense stems.

Hittite *weh-* 'turn' (intransitive),¹³ is identical in meaning with the IE roots **uer-* (Lat. *verto*, Skt. *vr̥nakti*, Lith. *ver̃pti* 'spin', etc.), **uel-* (Lat. *volvo*, Skt. *vr̥noti* 'cover', etc.), **uei-* (Skt. *vayati* 'weave', Lith. *ṽyti*, Lat. *vicio* 'plait', etc.).¹⁴ One must suppose, then, either that PIE had such forms as **uehrt-*, **uehrnegh-*, **uehrp-*, etc., or that *h* in this word is a root-determinative analogous to *r*, *l*, and *i* of the corresponding IE roots. The second alternative is certainly the more attractive.¹⁵ Similarly I am inclined to consider the *h* of *pahš-* 'protect'

⁸ See Zimmern ap. Lehmann-Haas, *Textbuch zur Religionsgeschichte*, 340; Götze, *Hatt.* 77.

⁹ The formal parallelism of this etymology and the next might suggest rather IE **ter-* 'cross;' but the semantic development would be difficult.

¹⁰ See Friedrich, *Zeitschrift für Assyriologie* NF 2. 277 (1925), *Staatsverträge des Hatti-Reiches in Hethitischer Sprache* 164 f.

¹¹ See Friedrich, *ZA* NF 3. 200 (1927).

¹² See Hrozný, *BoSt.* 5. 28s; Friedrich, *Staatsvert.* 26 f.

¹³ See Sommer, *BoSt.* 7. 401. Hrozný's (*BoSt.* 3. 145s) connection of the word with Lat. *veho* 'carry' is impossible in view of the development of *gh* in Hittite; and in any case the meaning of *veho* is not very close to that of the Hittite verb.

¹⁴ On these roots and their numerous extensions, see Persson, *Beiträge zur Indogermanischen Wortforschung* 321 ff., 497, ff., 538 ff.

¹⁵ A common verbal suffix in Hittite is *-ahh*, which produces causatives from adjectives; see Friedrich, *ZA* NF 1. 16 f. (1924).

a determinative parallel with the *i* of Gk. ποιμήν 'shepherd'. This will enable us to connect with *pahš-* the curious form *palahšaš*, which seems to mean 'protection' (see Götze, *Hatt.* 75), and which reminds one of Skt. *pālas* 'protector' beside *pāti* 'he protects'.

The probable reading in *KUB* 14. 3. 1. 7 is *Lūtu-uh-kán-ti-in*, and the variant writing by the Assyrian word *LūTAR.TE.NU* in line 9 proves that the meaning is 'commander-in-chief'. I would connect this noun *tukkaš* with Lat. *dux* 'commander', OHG *heri-zogo* 'army-commander', and the related words.

If Hrozný and Zimmern-Friedrich¹⁶ are right in translating *gišmahlan* (acc.) by 'apple trees', this must be the word that appears in Gk. as *μῆλον*, and in Lat. as *mālum*. It is likely, however, that the three languages have borrowed from the same source or from related sources.

Hittite *h* appears between vowels in *pahhur* (earlier *pahhuwar*) 'fire', gen. *pahhuenaš*, whose connection with the *r/n*-stem Gk. *πῦρ*, OE *fiur*, Goth. *fōn*, gen. *funins*, was recognized by Friedrich, *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 76. 159 (1922). This stem shows so many analogical forms in the IE languages that it is not easy to trace their relationship with certainty. I will not now try to rearrange the material in the light of the Hittite evidence; but it seems clear that we must start from an ablaut base ***pehe_uor/n*, or the like. Hittite *pahhuwar* may represent ***p^huór*, and *pahhur* is a contraction of *pahhuwar*.

Similarly *lahuwa-* 'pour', *lahhuš* 'basin', and IE **lou-* 'wash' (Gk. *λούω*, Lat. *lavo*, etc.) must be traced to a PIE ablaut base ***loheu-*, whence ***lóhu-*, the source of the Hittite words and perhaps also of IE **lou-*.¹⁷

Hittite *mehur*, gen. *mehunaš*¹⁸ occurs frequently in the phrase *nekuz mehur*, which means 'evening'. The meaning of *nekuz* is 'of night' (= Lat. *noctis*), but whether *mehur* itself means 'time' or 'point of time, moment' is not yet clear. The word may be connected with IE **meu-* 'move' (Lat. *moveo*, Lith. *máuti* 'aufstreifen, anstreifen') through ***méhu-* from an ablaut base ***meheu-*. The meaning 'moment' would then offer a parallel to Lat. *momentum* (*temporis*) from *moveo*.

There are also a number of Hittite words in which initial *h* must be

¹⁶ Hrozný, *Code Hittite* 106 f.; Zimmern and Friedrich, *Hethitische Gesetze* 21.

¹⁷ This etymology and the preceding one were briefly presented in *LANGUAGE* 3. 121 f.

¹⁸ See Sommer, *BoSt.* 7. 32-6.

regarded as an original sound that was lost in IE. The word for 'grandfather' is *huhhaš*,¹⁹ which is to be identified with Latin *avus* on the basis of PIE ***hauhos*. Similarly *hannaš* 'grandmother'¹⁹ goes with OHG *ano* 'grandfather', *ana* 'grandmother', Lat. *anus* 'old woman', etc.

The prior element of *hantezziyaš*, *hantezziš* 'first' should be **hanta* 'forward, before', to harmonize with *appa* 'back, afterwards' beside *appezziyaš*, *appezziš* 'last'. This **hanta* must be identified with Gk. *ἄντα* 'opposite'. The temporal force which appears in Hittite is familiar in the related Lat. *ante* 'before' (probably locative, while *ἄντα* is probably accusative, of a noun meaning 'face'). In another connection I hope soon to discuss the final member of these two Hittite compounds.

I have shown (TAPA 58. 23) that *hašduir* means 'branches'. Although the formative material at the end of the word is not clear, we must identify *hašd-* with Gk. *ῥῥος*, Gothic *asts* 'branch'. It follows that *šd* is the nil-grade of ***sed-* 'sit', and that Hittite *ha-* and IE *o-* both come from PIE ***ho-*.

Hittite *hamešhaš*, *hamešhanza*²⁰ is certainly a season of the year suitable for military operations. After mentioning the winter the historical texts frequently introduce the account of the next campaign with the words: *ma-ah-ha-an-ma ha-me-eš-ha-an-za ki-šá-at*, 'but when it became *h.*' Such a context admits either 'spring' or 'summer'; but KUB 4. 4. 3. 2 ff. (cited by Götze) recommends that the king devote the *h.* to warfare, and that, of course, must be 'summer'. Ehelolf's attempt, on the basis of a mutilated text, to establish the meaning 'early' for our word does not convince me. On the contrary I should conclude that the AN.TAH.ŠUM festival which Ehelolf is there considering, was a harvest festival. I connect this word with the IE root **mē-* 'reap', which appears in OHG *māen*, OE *māwan* with a formative *i*, and in Lat. *meto* with a formative *t*. Gk. *ἀμᾶω* 'reap' and *ἀμᾶω*, *ἀμᾶομαι* 'cut; gather' present a number of difficulties,²¹ but no one

¹⁹ See Forrer, 2 *Boghazköi-Texte in Umschrift* 22*, *Forschungen* 1. 90; Friedrich, *Archiv für Orientforschung* 4. 95 (1927).

²⁰ See Hrozný, *BoSt.* 3. 1904; Sommer, *BoSt.* 4. 20; Götze, *Hatt.* 92; Ehelolf, *Sitzungsberichte der Preussischen Akademie der Wissenschaften, Phil.-Hist. Klasse* 21. 2672 (1925).

²¹ See especially Bechtel, *Lexilogus zu Homer* 36 f., and Walde-Pokorny, *VWIS* 2. 259, and references. I am inclined to agree with Schulze that the long initial syllable of *ἀμᾶω* 'reap' is due to a prefixed *ἀπ* (properly **ἀμᾶω*). It is noteworthy that the syllable is long only where the context favors the meaning of *ἀπ*, but not, for example, in *Il.* 3. 359: *διὰ μῆγε χιτῶνα ἕγχος* 'the spear pierced the tunic.' I find no reason to distinguish two different verbs, as Bechtel does.

doubts the relationship with the Germanic words. Quite possibly Greek has lost intervocalic *s* rather than *z*; and in any case we should probably recognize *η* as the vowel of the uncontracted theme, as in ζῆν 'live'. Hittite *hamešhanza*, then, contains the PIE prefix ***ho-* and the root ***mē-* with formative *sh*,²² which may have been present also in a prehistoric stage of Gk. ἀμάω.

The noun *happar* 'deal, trade' and the verb *happara-* 'sell'²³ go with Gk. ἐπέπασα 'I sold', ἐποπον 'I gave' and Lat. *paro* 'buy'; they contain the same prefix that we have been discussing.

Similarly we may connect *hulaliya-* 'wind, entwine', *GIŠhulali* 'distaff', and *hulali* 'winding-sheet' (?)²⁴ with IE **uel-* 'wind' (Lat. *volvo*, Gk. εἰλόω, Skt. *vr̥ṇoti*, etc.), the second *l* belonging to a suffix. Just so *hušk-* 'await'²⁵ contains the nil-grade of **ues-* 'dwell' (Skt. *vasati*, OHG *wisan*, etc.), with iterative-intensive *k* (cf. *halzišk-* beside *halziš-*).

Hittite *harp-* 'place, lay'²⁶ must be connected with Skt. *arpayati* 'throws, places' and *arpanam* 'a throwing, placing'. Either the Hittite verb contains the prefix *ha-* or Skt. *arp-* originally had no connection with *r-* 'go'; for the latter root appears in Hittite without initial *h* (*ari*, *arai*, *artari*, *arnuzzi*).²⁷ In either case we have here another word in which Sanskrit causative *p* was inherited (see LANGUAGE 4. 4).

Hittite *hapatiš* 'servant, vassal'²⁸ is identical with Homeric *δπηδός* (Doric *δπαδός*) 'attendant', except for the stem vowel. The Hittite word disposes of Fick's²⁹ connection of *δπηδός* with *ἐπομαι*, and suggests the PIE prefix ***ho-*. The Homeric synonym *δπάων* contains as its second member the participle of the verb which appears in Hittite as *pa(i)-* 'go'.³⁰ Both the Hittite participle *panza* 'going' and the second member of *δπάων* represent PIE ***pājont-*. Homeric *δπηδός* probably, contains the root of *πηδάω* 'leap', which therefore contains original *ā*, and must be separated from *ποδ-*, etc. I do not know of any Hittite

²² Formative *s* is very common in the Hittite as in the IE verb. Friedrich, ZA NF 1. 16 f., called attention to the Hittite causative suffix *ah(h)*. There is also a simpler form of the suffix (nil-grade?), whose meaning is not clear.

²³ See Friedrich, *Staatsvert.* 92 ff.

²⁴ See Sommer and Ehelolf, *BoSt.* 10. 72.

²⁵ See Ungnad, *Orientalistische Literaturzeitung* 26. 572 (1923); Friedrich, *Staatsvert.* 170.

²⁶ See Friedrich, ZA NF 1. 175, (1924).

²⁷ See Friedrich, ZA NF 2. 41-5 (1925); Sturtevant, LANGUAGE 3. 165 f., 220 f.

²⁸ See Götze, *Madduwattāš* 105 f.

²⁹ *Vergleichendes Wörterbuch der Indogermanischen Sprachen* 14. 141.

³⁰ See most recently Götze, *Madd.* 59.

word, other than *hapatiš*, which contains a dental extension of *pa(i)* 'go'.

Medial *h* appears in a number of personal endings, and here too it is impossible to find a corresponding sound in the IE languages. The endings with *h* belong to the second or *hi*-conjugation or to the medio-passive voice, and, with one exception, they designate the first person singular.

Since the *hi*-conjugation has several points of contact with the IE perfect and several others with the IE aorist,³¹ it is reasonable to search among the perfect and secondary endings for analogues to Hittite *-hi*, *-ahhi* (first person singular present) and *-hun*, *-ahhun* (first person singular preterit). If we carry *-ahhi* (e.g. *šaggahhi* 'I know': *šakki* 'he knows' back to PIE *-ahi*, IE ought to show *-ai*, and this is what we find in Skt. *tutude* 'I have thrust', Lat. *tutudī* 'I have beaten', Old Slavic *vědě* 'I know', etc. This is a middle ending in Skt., although Lat. and OSl., like Hittite, make it active. Since IE had another ending for the perfect active (e.g. Skt. *veda*, Gk. *oīda*, Goth. *wait*), it probably agreed with Skt. rather than with Lat. and OSl. in this matter. But if Lat. and OSl. could transfer the ending from middle to active, a similar transfer was possible in Hittite or an opposite transfer in primitive IE; and so we need not hesitate to identify a Hittite active ending with an IE medio-passive ending.

In Skt. the primary as well as the perfect middle ending is *-e*, and there is a good chance that *-ai* was the primary middle ending in the IE period, at least for non-thematic verbs. Quite possibly, also the Skt. secondary middle ending *-i* (e.g. *akri* 'I made': *akṛta* 'he made') was used in the IE non-thematic verbs. With this we may identify the Hittite ending *-hi*, as in *arhi* 'I have arrived'. The preterit endings *-hun* and *-ahhun* are apparently the results of contamination of *-hi* and *-ahhi* with *-un*, the preterit ending of the *mi*-conjugation.

Since it is impossible to consider the medio-passive endings with *h* apart from the other medio-passive endings, we must examine the system as a whole. It is already well known that Hittite possesses medio-passive endings in *r* analogous to those of Italo-Celtic and Tocharian; but it is not so widely known that the language has an equivalent set of endings without *r*. The material is presented in parallel columns in Table I.

Such a variety of equivalent forms is somewhat bewildering; but a

³¹ For the former, see LANGUAGE 2. 33 f., 3. 161-8, 215-25; for the latter, see *ib.* 3. 223-5.

little study reveals the fact that the present forms without *r* form the basis of most of the others. The preterit consists largely of present forms with a suffixed *t* or *ti*. Thus *kišat* 'he became' is an extension of *kiša* 'he becomes', and the plural *kišantat* 'they became' adds *t* to the ending of *iyanta* 'they come'. There is the same relationship between the end-

TABLE I

	Form without <i>r</i>	Forms with <i>r</i>
Present	1	iya-hhari, ar-hahari
	2 neya-ttati	
	3 kiš-a, iya-tta	
	1 eš-wašta(ti)	iya-ntari
	2 pahš-duma	
	3 iya-nta	
Preterit	1 { kiš-hat, iya-hhat kiš-hahat, iya-hhahat	
	2 kiš-tat	
	3 kiš-at, iya-ttat, išduw-ati	
	1 pariya-waištati	
	2 kiš-dumat	
	3 kiš-antat, nahšariya-ndati	
Imperative	1	ar-haharu
	2 watka-hhut	
	3	
	1	kiš-aru, iya-ttaru
	2 ar-dumat, ki-dumati	
	3	
		iya-ntaru

ings of the second pl., *kišdumat* 'you became' and *pahšduma* 'you protect'. The second singular *kištat* 'you became' contains a third personal ending, a thing which is common in the preterit active; e.g. *pešta* 'you gave' and 'he gave'. If in the same way we remove the final *t* of the first singular, we arrive at basic endings *-ha* and *-haha*, which one might expect to find at the head of our first column.

The longer suffix *-ti* appears in *išduwati* 'he appeared' and *nahšariyandati* 'they feared'; but this, unlike *t*, sometimes appears in present forms. The second personal *neyattati* 'you turn, send' may or may not be an extension of a form **neyatta*; but, at any rate, *ešwaštati* (*e-šú-wa-áš-ta-ti*) 'we sit' has a by-form *ešwašta* (*e-šú-wa-áš-ta*).³²

Similarly the present forms in the second column of Table I are clearly derived from those in the first column by the addition of a suffix *-ri*. Compare *kiša* and *kišari*, *iyatta* and *iyattari*, *iyanta* and *iyantari*. Consequently the first personal forms *iyahhari* 'I go' and *arhahari* 'I come' presume some such forms as **iyahha* and **arhaha*; that is, precisely such

TABLE II

IE.	GK.	SKT.
(*bherōr)	φέρομαι	bháre
*bheresai	φέρειαι	bhárase
*bheretai	φέρεται	bhárate
*bheromedha	φέρόμεθα	bhárāmahe
*bheredhe (?)	φέρεσθε	bháradhve
*bherontai	φέρονται	bhárante
*bherouedha (?)	φέρόμεθον	bhārāvahe
	φέρεσθον	bhárethe
	φέρεσθον	bhárete

present forms as should lie at the basis of the preterits *iyahhat* and *iyahhahat*. In view of these two lines of evidence I conjecture that Hittite once possessed a present middle first sing. ending in *-ha* or *-haha*. Probably we shall sooner or later find such forms in present value.

The imperative second pl. *ardumat* 'come ye' has the same ending as the preterit *kišdumat*, and the ending of *kidumati* 'lie ye' is related to this as is the ending of *išduwati* 'he appeared' to that of *kišat* 'he became'. The active voice also uses the preterit second pl. as imperative, e.g. *iyatten* 'ye made' and 'make ye'. Compare the 'injunctive' use of augmentless aorists in Skt. The *r*-forms of the imperative are obviously analogical; compare the active forms *iyallu* 'I will make', *iyaddu* 'let him make', *iyandu* 'let them make'. I have no suggestion to offer as to the imperative second sing. ending *-hhut*.

The relationship of some of the Hittite medio-passive endings to IE

³² See Friedrich, *AO* 4. 95 (1927).

terminations is obvious. The *-ta* of the third sing. present and *-nta* of the corresponding pl. must be identified with the IE secondary endings *-to* and *-nto*. The only element in Table I that can contain the final *-ai*, which is characteristic of the primary tenses of the middle voice in Gk. and Skt., and to some extent also in IE, is the separable *-ti* of *ešwaštati išduwati*, etc. The particle or suffix ***tai*, which we must therefore assume for PIE, is the direct source of the IE primary ending *-tai*, and from there final *-ai* was no doubt carried by analogy to other IE primary middle endings, such as the plural **-ntai*. After the close of the IE period the process was carried somewhat further in Greek and much further in Skt., as is evident from Table II (slightly altered from Brugmann).

The first pl. ending *-wašta* looks like a contamination of the IE dual active ending **yes*, **-yos*, which might appear in Hittite as **-waš*, with the dual middle ending **yedha* (Hittite **-weta*), which I infer for IE on the strength of Skt. *-vahe*, Gk. *-μεθον*, (with *-ον* from the other persons), and the Gk. pl. ending *-μεθα*. Possibly Homeric Greek *φέρόμεσθα* 'we bring for ourselves' is a similar contamination of *φέρόμεθα* with the active *φέρομεν*, although the latter form survived into the historical period only in the Doric dialects. If so, the contamination probably occurred in primitive Greek, and this ending may have induced the *σ* of the second personal ending *-σθε* (beside Skt. *-dhve*).³³

The second pl. ending *-duma* must stand in some relation to the Skt. endings *-dhve* (primary and perfect) and *-dhvam* (secondary). It may contain the *nil*-grade of the secondary ending with a final *a* (originally *o*) from the third person.

Of peculiar significance is the correspondence of the *r*-endings of the third person with certain medio-passive endings of Italo-Celtic and Tocharian; *-tari* = Lat. *-tur*, and *-ntari* = Lat. *-ntur*, while *-ari* corresponds in form with the ending of OIr. *berir*, *-berar* 'he is carried', and of Osc. *sakrafir* 'let one sacrifice'. The evidence of Hittite does not favor the connection of these endings with the *r*-endings of the third pl. active, which has become almost a dogma of IE comparative grammar. Hittite employs the ending *-er* (often written *-ir*) to form preterit third plurals of either conjugation; e.g. *kuenzi* 'he kills', *kuenta* 'he killed', *kuennir* 'they killed'; *dai* 'he takes', *daš* 'he took', *dair* 'they took'. While this active ending is appended directly to the verb stem to form

³³ Brugmann, *Grundriss der Vergleichenden Grammatik der Indogermanischen Sprachen* 2, 3. 651, derives the *σ* of *-μεσθα* from the second personal endings *-σθε* and *-σθον*; but there is no evidence that the sound was original there either.

preterit third plurals, the medio-passive *-ri* is appended to certain present forms already characterized by a personal ending. While the ending *-er* is found in all active third persons preterit, the medio-passive *-ri* may be omitted without any change of meaning that has yet been detected. In the active ending the vowel precedes the consonant, but in the medio-passive ending it follows. It is possible, however, that the sharp distinction between the two endings is a Hittite innovation. For example, the final vowel of *-ri* may come from the ending *-ti* = IE *-tai*, which was discussed above.

We are now ready to consider *h* in certain of the medio-passive endings. Hittite *iyahhari* 'I go' and *arhahari* 'I come' may represent PIE ***iohori* and ***ḡhohori*, which should yield IE **iōri* and **ḡōri*. If the final *i* of the ending *-ri* is a Hittite innovation, we should assume rather PIE ***iohor* and ***ḡhohor*, whence IE **iōr*, and **ḡōr*. In either case we have a satisfactory source for the ending of Lat. *feror* 'I am carried', OIr. *labrur* 'I speak', etc.

The present first personal endings without *r*, which we have had to reconstruct for Hittite, namely *-ha* and *-haha*, would similarly lead to IE *-ō*; and this, I imagine, is the source of the anomalous first personal active ending of the IE thematic verbs. After *-ōr* had established itself as characteristic of the medio-passive, the originally equivalent *-ō* was re-interpreted as an active.

The above conclusions bring two new arguments in favor of Forrer's theory that Hittite represents an earlier off-shoot from the parent stock than the IE languages strictly so called.³⁴

The Hittite medio-passive inflection has a far more primitive appearance than that of any IE language; we can still analyse a number of its forms into their elements. Some of these peculiarly lucid inflectional endings seem nearly identical with an early stage in the development of the IE medio-passive, while others (the preterit and part of the imperative endings) must result from an independent development in which IE had no share. No doubt such a state of affairs is conceivable in a language related to the parent speech precisely as are Skt. and Gk.; but it is easier to understand, if we can ascribe the traces of an early stage of IE to an early date of separation, and the features which are totally unlike IE to an independent development.

More cogent is the discovery in Hittite of an original sound which none

³⁴ See Forrer, *Mitteilungen der Deutschen Orient-Gesellschaft* 61. 26 (1921). Cf. Kretschmer, *Glotta* 14. 300-19 (1925); Sturtevant, *LANGUAGE*, 2. 25-34.

of the IE languages have preserved. There is some difficulty in assuming even in a single language the total disappearance of a common sound without leaving a trace. Several sounds of the parent speech are lacking in each of the historical tongues, but each of them is represented more or less consistently by some other sound. Ancient Gk. had no voiced aspirates, but it had voiceless aspirates instead. In Modern Greek there are no aspirates at all, but spirants have taken their place. In Greek *s* was early lost between vowels and initially before vowels, and in Modern Greek there is nothing left to take its place; but *s* still survives under certain other conditions. Can we then assume that so rare a phenomenon as the total loss of a common sound has occurred independently in each of the eight branches of the IE family?

Some will reply that the one speech sound which is frequently lost without leaving a trace is aspiration, and they will adduce the total loss of Latin *h* in all the Romance languages. Quite aside from the fact that Hittite and PIE *h* was probably much stronger than Lat. *h* (like German *ch*, or even stronger), it was also a far more frequent sound than Lat. *h*.

But even if we could admit the validity of the Romance parallel, it would but strengthen our case. Latin *h* was not lost independently by each of the Romance languages; it was lost once for all in Vulgar Latin. Just so PIE *h* was lost just once during the history of IE, while it was preserved intact by Hittite.

SOME LINGUISTIC NOTES ON THE MĪMĀNSĀ SYSTEM

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Hindus of reflective tendencies have always been much given to linguistic analysis and speculation. All Indian systems deal more or less with problems of the nature of language, the relation of sound to sense, etc. When the time comes for a general History of Linguistic Theories, the Indian section will bulk large. While none of the recognized philosophic systems can be neglected, the three most important ones from this standpoint are, no doubt, the Vaiyākaraṇikas or grammatical school (most prominently represented by Pāṇini), the Naiyāyikas or followers of Nyāya, and the Mīmāṃsakas or school of the Pūrva-Mīmāṃsā.

The Mīmāṃsā is in essence a code of legal logic, intended to interpret the laws of the Vedic ritual, and deduced—at least in theory—from the texts of the Veda. It holds that the Veda is eternal, uncreated, without beginning or end, and of absolute authority. Vedic commands constitute the whole duty of man, and it is the aim of the Mīmāṃsā to interpret those commands systematically—to deduce logical principles by which the apparently unsystematic Vedic texts may be understood and applied in practice. The logical principles which the Mīmāṃsā worked out for the ritual code could be, and were in fact, applied to other codes of law, that is what we mean by law in the ordinary sense. This constitutes one of the reasons for the historic importance of the system.

The other chief reason is the linguistic theories and methods of the Mīmāṃsā. Some of the more spectacular of these, such as the doctrine of the eternality of words, have been repeatedly described in western writings.¹ They have, in fact, attracted an amount of attention quite disproportionate to their prominence in the original sources. It is easy

¹ See e.g. Keith, *The Karma-Mīmāṃsā* 37ff., London, 1921. This handy little volume is the most convenient source of information on the system; but it deals almost entirely with its speculative side, whereas in most of the original texts the practical side bulks very much larger. Of this Keith tells us little, and what he tells is not always correct.

to understand this. And yet the more modestly practical part of the *Mīmāṃsā* also contains not a little material for the historian of linguistic theories. And since this part is far greater in bulk, and also in importance,² in the eyes of the *Mīmāṃsā* writers themselves, it seems worth while to call attention to some of that material.

First, a principle of interpretation which is not only absolutely sound and scholarly, but of great practical value. It is one which many etymologists of the present day need to ponder. The *Mīmāṃsā* distinguishes two methods of interpretation of words: *yoga*, or the meaning based on analysis and etymological derivation, and *rūḍhi*, or conventionally established meaning. And it lays down the firm principle that '*rūḍhi* is stronger than *yoga*'. In other words, it is our duty to define the meaning of a word as used in actual texts or speech; and, if that is possible, to interpret the word always in *that* way, without regard to its derivation (real or apparent). It is not always possible to do this; and when it is impossible, we may make use of etymological interpretation, but only *faute de mieux*. This vigorous recognition of what we call 'philological' interpretation, in the true and original sense of that word, as distinguished from etymological interpretation, is very creditable to the sound sense of the *Mīmāṃsakas*. Many a western scholar has erred thru failure to live up to the principle that *rūḍhi* overrules *yoga*—or more precisely thru failure to investigate with sufficient thoroughness the *rūḍhi* of particular words, that is, their meaning in actual usage.

This rule is called the *rathakāra-nyāya*, from the stock example given of it in the *Mīmāṃsā* texts. A Vedic injunction says that 'a carpenter (*rathakāra*) shall lay the sacred fires in the rainy-season'. By *rūḍhi*, a carpenter means a member of a particular low caste, which has no right to lay the sacred fires at all (a privilege reserved for Aryans). It might then be suggested that, by *yoga* or etymology, the word 'carpenter' means 'maker of wagons' (*ratha-kāra*), and so might be applied to an Aryan who makes wagons. This would seem to simplify the task of an interpreter of the Vedic text; we might expect the scholastic *Mīmāṃsā* gladly to avail itself of such a dodge. But no: *rūḍhi* prevails, *ruat caelum*, and tho it forces us to accept a difficult and rather far-fetched

² For instance, the *Mīmāṃsā Nyāya Prakāśa* of Āpadeva never once refers to the doctrine of the eternality of the word. Yet this is the most widely-known and popular introductory text-book on the *Mīmāṃsā*. My translation of it, with text, introduction, and glossary, will shortly be issued by the Yale University Press. This article is based entirely on it.

explanation, the word *rathakāra* cannot be assumed to have any except its standard meaning, namely, a member of a certain low caste.³

Coming to matters of linguistic analysis, we find first that words are analyzed into root or stem, and ending. Let not the modern linguist sniff, however much he may deprecate the composition-theory of word-formation (which seems to be enjoying a certain revival at the moment, by the way). For that theory is not involved. The Mīmāṃsā is thinking in psychological, not formal, terms. This is sufficiently shown by the fact, to be mentioned later, that it sometimes finds more than one 'meaning' in a single unitary ending. It means only that in any inflected word there must be at least two semantic elements, the entity designated by the 'stem' or 'root', and the syntactic relationship designated by the ending. For an inflectional language, I see no possible scientific objection to this.

Furthermore, these two psychological elements cannot exist baldly and independently side by side; nor, obviously, can they be in a state of equal correlation (as in a copulative compound, meaning 'A and B'). One must be in dependence on the other. And according to the Mīmāṃsā it is invariably the root or stem which is subordinate; the meaning of the ending is the principal element, upon which the stem-meaning depends. This might sound at first like mere perverse pedantry. But a very little reflection will show, I think, that if any such analysis is to be made at all, the Mīmāṃsā is quite right. The meaning of the ending cannot depend on that of the base. The syntactic connexion of the noun, for instance, or the modality of the verb: it is these concepts which, logically and psychologically, are predominant, as bringing the word into relationship with other words. The base is connected with other words only thru the ending. And, as the Mīmāṃsā says, what is dependent on one concept cannot be wrenched away from that and made dependent on another; 'otherwise in response to the command "bring the king's servant (*rāja-puruṣa*)", one might undertake to bring the king!' Just as 'king's' is dependent on 'servant', so the base-meaning of a word is dependent on the meaning of the ending.

This may not seem of very much practical importance; but in the code of logical principles evolved by the Mīmāṃsā it does, in fact, repeatedly come into play, and proves its value in actual practice. It would take

³ The fact doubtless is that the particular *rūḍhi* in question, in this instance, grew up after the date of the Vedic text quoted. Historic change in the meaning of words is not recognized by the Mīmāṃsā. But tho the example may not be entirely a happy one, the principle is none the less sound and valuable.

us too far afield from linguistic interests to illustrate this here. I wish, however, to refer to one special case of the principle just laid down, which is at the same time regarded by the Mīmāṃsakas themselves as perhaps the most fundamental element in their entire system—the heart of its heart.

According to their theory, the primary purpose of the Veda is to expound human duty (*dharma*). It follows that the heart of the Veda is found in its injunctions (*vidhi*). All else is subsidiary to them. In an injunction, such as 'who desires heaven shall sacrifice', the central element is the injunctive verb, 'he shall sacrifice' (*yajeta*). Typically, this is an optative form (*liñ*, in the technical vocabulary of Hindu grammar); the fact that other verb-forms than the optative may be so used is abundantly recognized in practice, but when so used they are regarded as equivalents of optative forms.

The optative *yajeta*, 'he shall sacrifice', is analyzed, of course, into the root *yaj*(-i; so roots are technically quoted), and the ending (-e)-*ta*. As always, the ending is the 'principal' part, the meaning of the root being subordinate to it. And the verbal ending expresses what is called the *bhāvanā*, which is the heart of the injunction.

This *bhāvanā* is the *Prunkstück* of the Mīmāṃsā. Until one gets a clear understanding of it, it is impossible to understand the system. Derived as a *nomen actionis* from the causative of the root *bhū*, the word *bhāvanā* means 'efficient-force', 'bringing (something) to be'; or more precisely, 'a particular kind of operation in an efficient-agent which is conducive to the production of the effect', or, yet more literally, 'a kind of activity in someone-who-is-bringing-(something)-about which is conducive to the coming-into-being of that-which-is-to-come-into-being' (*bhavitur bhavanānukūlo bhāvakavyāpāraviśeṣaḥ*).

Every verb has an efficient-force, *bhāvanā*. It is the active verbality-notion. But in an optative (injunctive) verb there are two *bhāvanās*, two efficient-forces, tho both are expressed by the same ending. One is the general-verbality (*ākhyātatva*) which is expressed by any finite verb-form; this the optative shares with all the rest. The other is the specific 'optativeness' (*liñtva*) which is expressed only by the optative forms, and which is the *ultra-central element in the whole injunction and therefore in the whole Veda*, because it is that which instigates a person to perform the action suggested by the verb. That is, the word *yajeta*, 'he shall sacrifice', expresses (1) an instigation (expressed by the 'optativeness' in the ending, the injunctive efficient-force) to (2) effect (expressed by the 'general-verbality' element in the ending, the general-verbal efficient-

force) (3) something (viz. the object which the performance is to secure, such as 'heaven'),—by means of (4) a particular course of action (expressed by the verbal base, in this case *yaj-*, 'sacrifice').

Parenthetically, I may note that in certain injunctions (of accessory elements,⁴ *guṇa-vidhi*) the base-meaning (as 'sacrifice') is regarded as object or end of the general-verbal efficient-force; and this might seem to us a more natural analysis for all injunctive words (we might express it by the three English words '1. shall, 2. perform, 3. sacrifice'). But for good reasons of its own—specifically, in order to bring the 'fruit' or reward of the sacrifice into relation with the *bhāvanā*—the Mīmāṃsā teaches that in primary or originative injunctions of rites (*utpatti-vidhi*) the 'base-meaning' (sacrifice) is rather the means or instrument of the efficient-force, its end being the 'fruit' (as heaven).

It will be noted that the term *bhāvanā*, efficient-force, fits both the injunctive idea and the idea of general-verbality. Both mean 'bringing (something) into being'; tho the objects are different. The object of the injunctive efficient-force is the general-verbal efficient-force ('shall—what?', answer, 'effect' [the desired end]);⁵ the object of the latter is the desired end ('[shall] effect—what?', answer, 'the desired end', as e.g. heaven).

The general-verbal efficient-force is called *ārthī bhāvanā*, 'efficient-force of the end or goal' (*ārtha* = *phala*, 'fruit'), because its object is the end or fruit or reward of the performance; *yajeta* means *yāgena iṣṭam bhāvayet*, 'by sacrifice he shall effect the desired end'.

⁴ An accessory, *guṇa*, is a subordinate element in a rite, as e.g. the material offered in sacrifice. An accessory-injunction, *guṇa-vidhi*, is one which merely enjoins a particular accessory for a rite which has been enjoined in another injunction; as, *dadhnā juhōti*, 'he shall make oblation with sour-milk', referring to the *agnihotra* oblation already enjoined by the injunction *agnihotram juhōti*. In these accessory-injunctions, the rite itself (expressed by the verbal-base, as *hu-*, *homa*, oblation) is the object of the efficient-force; 'with sour-milk he shall effect the oblation (which has been enjoined previously).' But unless the oblation has been already enjoined, it is clear that this interpretation would leave us without proper motivation for the instigating force. Why perform the oblation at all—with or without sour-milk? Despite the insistence on Vedic authority—nay, rather because of the repeated Vedic appeals to human self-interest—it is felt that a 'fruit' must be found; otherwise man will not perform the rites. This fruit (which is expressed by an 'injunction of qualification', *adhikāra-vidhi*) is then regarded as the end of the efficient-force in primary or originative injunctions.

⁵ Hence the general-verbal efficient-force is dependent on the injunctive one; the latter is the principal of principals.

The injunctive efficient-force is called *śābdī bhāvanā*, 'efficient-force of the Word', because in Vedic injunctions the force behind the injunction rests only in the Word, the Veda,—not in any agency, human or divine. (In worldly injunctions, on the other hand, it rests in the will of the person who issues the injunction; to these the term 'word-efficient-force' could not apply.) That is, the Word says man is to do certain things; this Word is absolute, and is its own authority. There is no commanding agent—not even God, who, if He exists, is not the power behind the Veda, and does not enforce Vedic commands, nor deal out rewards for their performance. (It has been held that the Mīmāṃsā originally denied the existence of God. It seems that it would be truer to say that it ignored God, simply as having nothing to do with its subject-matter. Many later Mīmāṃsakas, in any case, were theists.)

Every element in the entire Veda is brought into relation to one of these two *bhāvanās* or efficient-forces—in relations of end, means, or manner. For instance, the explanatory-statements (*arthavāda*) have no other purpose than to glorify ritual actions, and so provide the manner of operation of the injunctive efficient-force (*śābdī bhāvanā*); that is, the instigation is helped to be effective by statements which glorify the action to which it instigates. And so finally the entire Veda is made to depend upon the injunction; of which the injunctive verb is the core; and of this in turn the core is found in the ending, expressive of efficient-force of two kinds, the general-verbality force, and the injunctive force, this latter being the ultimate of ultimates, the peg on which the whole system of Vedic duty hangs.

This is not the whole story. Various Mīmāṃsā scholars try to define even more precisely the exact psychological values of each of the two *bhāvanās*. They argue hotly against one another, and vie with each other in subtlety. But these discussions are of less interest to linguists. If any one cares to follow them, he can do so shortly by looking into the book mentioned in note 2.

Let me close by quoting from a brief but very valuable sketch of the system by Thibaut, in his Introductory Remarks (page xiv f.) to his edition and translation of the *Arthasaṃgraha*, a Mīmāṃsā treatise (Benares Sanskrit Series, No. 4; 1882). This Introduction deserves to be much better known than it is; it has not its equal as a careful, penetrating, and lucid statement of the practical intent of the Mīmāṃsakas. Thibaut says: 'The Mīmāṃsā certainly deserves greater attention than it has hitherto received. It has indeed none of the attractions which

the other *darśanas* derived from the speculative character of their contents; its scope is limited and the nature of the investigations in which it is engaged leaves no room for high flights of the imagination.⁶ But it possesses counterbalancing advantages. Its subject matter is of a positive nature, its method is sound, and its reasoning in most case convincing.'

⁶ This, I think, is needlessly exaggerated in its depreciation of the speculative side of the system. Thibaut was presumably thinking of the work he was dealing with, the *Arthasaṃgraha*, which like the *Mīmāṃsā Nyāya Prakāśa* (see note 2) does not deal with that side.

THE IE ROOT **meik-*: **meig-* AND AVESTAN *mīzān*

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Certain forms of the Greek word for 'mix' which have γ instead of κ as the final of their root-syllable, e.g., the present $\mu\lambda\gamma\upsilon\mu\iota$ and the 2nd aorist $\epsilon\mu\lambda\gamma\eta\nu$, appear to be anomalous when compared not only with the other forms of the same Greek verb but also with its cognates in other Indo-European languages, where all forms point to \hat{k} as the primitive IE root-final. Boisacq¹ derives $\mu\lambda\gamma\upsilon\mu\iota$ from pIE **meik-* and states, without further comment, that 'le grec a la gutturale douce'. Walde,² s. v. *misceo*, gives the Greek cognate as 'mit Media', but makes no remark on the phenomenon except to reject Wackernagel's³ theory of an independent origin for $\mu\lambda\gamma\upsilon\mu\iota$. Apparently, then, Boisacq and Walde explain the disagreement in root-finals by the theory of the so-called variation of the root-determinative.⁴

Another possible explanation is that some word-contamination affected certain of the Greek forms, but did not reach or, at any rate, did not affect the rest. This solution of a given linguistic riddle is easier to assume than to prove, and none such has yet been found to throw light on the present problem.

A third possibility is that the pIE root was originally not **meik-* at all, but **meig-*, weak grade **miġ-*, and that the few Greek forms are, with an exception to be mentioned presently, the only ones to show the original root-final unchanged. With this as a working hypothesis, we need not depend on the theory of a varying root-determinative to explain incongruities in Greek and other languages, but we may simply apply the ordinary principles of sound-change. Most verbal suffixes begin with either *s* or *t*, both of which would cause the preceding voiced

¹ E. Boisacq, *Dictionnaire étymologique de la langue grecque* 637-8 (Paris, 1916).

² A. Walde, *Lateinisches etymologisches Wörterbuch*² 488 (Heidelberg, 1910).

³ J. Wackernagel in Kuhn's *Zeitschrift für vergleichende Sprachforschung* 33. 39.

⁴ P. Persson, *Studien zur Lehre von der Wurzelerweiterung und Wurzelvariation*, Upsala, 1891.

root-final to become voiceless.⁵ Thus, for example, *miĝ- followed by the suffix of an s-present, an s-aorist, a sko-present, a to-participle, would become *mīks-, *mīks-, *mi(k)sko-, *mīkto-, respectively. The comparatively few forms in which the change from voiced to voiceless root-final cannot be explained by the initial sound of the suffix may fairly be credited to the influence of analogy. Greek is the only language in which the present stem-formation offers definite resistance instead of assistance to such a change, and the Greek preservation of the original root-final may be thus explained, in μίγνυμι and in Homeric μίσγω.

It was said above that only one word outside of Greek had preserved the voiced root-final unchanged. That word is Avestan mīzēn, found in *Yasna* 44. 20. The text⁶ of the stanza is as follows:

čiθēnā mazdā huxšaθrā daēvā āpharō
aṭ iṭ pərəsā yōi pišyeintī aēibyō kām
yāiš gām karapā usixšcā aēšēmāi dātā
yācā kavā ʾnmōnī urūdōyatā
nōiṭ hīm mīzēn ašā vāstrēm frādaighē

Bartholomae⁷ translates thus: 'Sind denn wohl die Daeva's gute Herrscher gewesen? Ich will die danach fragen, die sehen, wie ihretwegen der Karpan und der Usig das Rind der Raserei preisgeben, und wie der Kavay es unaufhörlich jammern macht, statt dass sie es hegen, um durch Aša die Landwirtschaft zu fördern'.

The verb mīzēn is generally connected with māēz- 'urinate', cognate⁸ with Sanskrit *mehati*, Latin *mingere*, Greek *μίχειν*, from *meiĝh-, original ĝh becoming Avestan z. But the aspirate and non-aspirate palatal stops fell together in the primitive Iranian period,⁹ so that Avestan z in mīzēn may equally well represent an original ĝ. Since phonology does not serve to identify mīzēn with its pIE source, let us examine the semantic possibilities. Here there has been much discussion but little agreement among scholars. Söderblom¹⁰ has listed in some detail

⁵ For this important step in my argument I am indebted to Prof. Roland G. Kent of the University of Pennsylvania.

⁶ Transliteration as in Chr. Bartholomae, *Altiranisches Wörterbuch*, Strassburg, 1904.

⁷ *Die Gatha's des Awesta*, Strassburg, 1905.

⁸ Boisacq 700.

⁹ K. Brugmann, *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*² 1. §§612-3 (Strassburg, 1897).

¹⁰ N. Söderblom, 'Note sur l'agriculture dans l'Avesta' in *Revue de l'histoire des religions* 59. 333-7.

the previous interpretations. All but those of the Pahlavi tradition and of Bartholomae understand a reference to irrigation by rain, or by urine either of gods or of cattle. The traditional interpretation, connecting *mīzēn* with *mīzd-* 'reward', is impossible on etymological grounds. Bartholomae¹¹ sets up a new root **maēz-* 'hegen', whose nearest cognate is Germanic *schmeichen* 'schön tun'. Söderblom takes it literally as 'urinate', citing the use of urine as a fertilizer in certain parts of Switzerland, and quoting, from *Fargard* 3 of the *Vendidad*, verse 6 which states that one of the best and most agreeable spots on earth is 'wo am meisten harnen Kleinvieh und Grossvieh'.¹²

Now since, as was said above, *mīzēn* can be derived from **meiḡ-*: **miḡ-* 'mix', I suggest setting up an Avestan root *maēz-* 'mix', of which *mīzēn* is the 3rd plural imperfect active used with transitive meaning. Its Greek cognate *μικνυμι* means, in the passive, 'to have intercourse with, to be united to'.¹³ Thus *mīzēn* acquires the meaning given below in my translation:¹⁴

'How, O wisdom, have the daeva-adherents been good rulers? But this I ask (of those) who see how for them, indeed, the Karapan and the Usig have given the herd to passion, and how the Kavi has caused-(it-)to-mourn continually; nor have they mated it for the furthering-of pasturage in accordance with justice'.

The sense of the last line agrees with what precedes, and with the well-known fact that Zoroaster preached the importance and the value of herding as the economic feature of his religious reform.¹⁵ Furthermore, verse 5 of the *Vendidad Fargard* already cited names as another of the earth's most agreeable spots that where, to quote Wolff's translation,¹⁶ 'man am meisten Kleinvieh und Grossvieh züchtet'.

¹¹ *AiW* 1108.

¹² F. Wolff, *Avesta.....übersetzt* 326 (Strassburg, 1910).

¹³ Liddell & Scott, *Greek-English Lexicon*⁸ 966, med.

¹⁴ This is my own translation, shortly to appear as part of my doctoral dissertation, and differs in certain points from that of Bartholomae given above.

¹⁵ Cf. R. G. Kent, 'Cattle-tending and Agriculture in the Avesta' in *Journal of the American Oriental Society* 39. 329-33.

¹⁶ *Av. übersetzt*, l. c.

LACHMANN'S LAW OF VOWEL LENGTHENING

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Apparently without guiding principle, the perfect participles passive of certain verbs in Latin have a short radical vowel, while others have a long vowel: thus *factus*, *spectus*, *scissus*, to *faciō*, *speciō*, *scindō*; but *actus*, *rēctus*, *vīsus*, to *agō*, *regō*, *videō*. An excellent summary of the discussion which has grown up around this point was given by Sommer¹ in 1914; but for the proper understanding of the problem it will be necessary briefly to repeat the main points.

Lachmann² in 1850 set forth the formulation that the vowel of the root is lengthened in the participle if the root ends in a voiced consonant, but is not lengthened if the root ends in a voiceless consonant; he supported this in part by reference to Gellius 9.6 and 12.3, and by other data for the quantities.

Osthoff³ in 1884 pointed out the instances which were in opposition to Lachmann's formulation, and sought to explain the lengthenings as due to the analogy of the perfect indicative active, where in many verbs the long vowel was inherited from the original speech, or by other analogies; but he did not deal with all the examples.

Holgar Pedersen⁴ in 1896 tried to make out of Lachmann's rule of thumb a law of phonetic development: that when in the participle a voiced stop became voiceless a preceding vowel was lengthened in Italic.⁵ He restricted the phenomenon to roots in which there was an original non-aspirate stop; but even then he had three notable exceptions, *fissus*, *scissus*, *sessus* to *findō*, *scindō*, *sedeō*, which he explained as remade for participles in *-no-*, cf. the Sanskrit cognates *bhinna-*, *chinna-*, *sanna-*.⁶

¹ *Handbuch der lateinischen Laut- und Formenlehre*² 122-3.

² In his commentary to Lucretius 1.805 (fourth ed., 1882).

³ *Zur Geschichte des Perfects im Indogermanischen* 110-7.

⁴ *Nordisk Tidskrift for Filologi*, 3d series, 5. 32-8.

⁵ The curious chronological inconsistency of this, in comparison with the results in other Indo-European branches, seems not to have occurred to him.

⁶ But in fact Sanskrit has *sattā-* alongside *sannā-*.

Sommer⁷ in 1902 accepted Pedersen's view with an important modification, that the groups *-g-t-* and *-d-t-* were restored in Italic by analogy to the consonant in the rest of the paradigm, and that with the second change to voicelessness the lengthening of the vowel took place.

Meillet⁸ in 1908-9 sought to show that there is a difference according to the vowels: that *a* and *e* were lengthened, but not *i*; that exceptions were old forms which did not undergo the re-formation. Otherwise his view is essentially that of Sommer. But he limits the re-formation to *-g-t-*, since *-ss-* hardly suggested an analogy.

Such are the important points in the discussion. But the Pedersen-Sommer theory posits a phonetic change which has no analogue among other phenomena of vowel-lengthening in Latin, and has difficulties with the three participles *fissus*, *scissus*, *sessus*, where the re-formation would give precisely the conditions leading to lengthening, and yet it does not occur. Meillet's theory also assumes a process which is not otherwise to be found in Latin; for where there is lengthening in Latin, *i* is lengthened as readily as the other vowels: cf. *nīdus* from **nīzdos*, *īdem* from **īsdem*, and the accusatives in *-ās -ēs -īs -ōs -ūs*. Further, Meillet must assume that length in *cāsus* is original length in the root, and for this there is no support; but he might have claimed that the participle in *-ssus* was remade to *-d-sus* after the present, since the type of *-so-* participles was well established and quite widespread.

I incline to think therefore, that despite Sommer's absolute dissent⁹ we are to find the solution along the lines proposed, and in part worked out, by Osthoff: in the analogical influence of the other forms of the stem. To this, for specific words, I add the operation of other factors, notably the avoidance of homonyms.

It is easily demonstrated that analogy was a powerful factor in the Latin participle. *Mānsus*¹⁰ has replaced an older **mantus*, still seen in *manīō* ¹¹; *pulsus* has replaced **pultus*, testified to by *pultō* 1; *nānctus* has in part replaced *nactus*. The older **sectus*, from *sequor* 3, still appears in the frequentative *sector* 1, but has itself been replaced by

⁷ *Hdb.*¹ 136-7; repeated in *Hdb.*² 122-3 (1914).

⁸ *Mémoires de la Société de Linguistique de Paris* 15. 265-6; repeated in Meillet et Vendryes, *Traité de Grammaire Comparée des Langues Classiques* 81 (1924).

⁹ *Hdb.*² 122; also *Hdb.*¹ 137.

¹⁰ I cite the participle consistently in the masculine form, even though it may not occur in this gender; and the form is to be taken as including by implication such other *t*-formations as may exist: the supine, the nouns in *-tor*, *-tura*, *-tiō*, *-tus*, etc.

¹¹ For clarity, the conjugation number is added to the present indicative form.

secūtus, to avoid confusion with *sectus* (**secatos*), participle of *secō* 1. *For* 1 should have **fātus*, = Greek *φάρβς*, and we still have the denominative of this lost participle in *fateor* 2; but *for* has extended the long vowel of the strong root to a new *fātus*. *Fateor* itself might be expected to have a **fatitus*, like *monitus*, *habitus*, etc.; but it has analogically taken the -ss- of IE dental roots. *Fatīscō* 3 has the decompounded *fessus* (as adjective only), from *dē-fetīscor*, *dē-fessus*; thus *fessus* avoided homonymity with *fassus*¹², and in the weakened forms there was no chance of confusion, since there is no **dē-fateor*, and *dē-fetīscor* is the only compound of the other. These examples may be greatly extended from Latin itself, and every student of Romanic philology knows the re-formations which are at the basis of the modern participles—notably the wide extension of -ūtus, which is found in Latin in but a few words, but is the basis of all French participles in -u and of the many Italian participles in -uto.

Now if we are to seek analogies in the participles with seemingly irregular long vowels, it is fair to examine the whole field, the roots with voiceless stops and those with aspirates, as well as those with voiced non-aspirates, and to see if traces of the phenomenon which is found in those with voiced non-aspirates may not show itself to some extent there also. For convenience, let it be remarked here that all participles with -nctus and -nsus must have a long vowel preceding; that the group -ss- remains after a short vowel and therefore marks a preceding vowel as short, but -sus after a vowel is always for -ss- reduced to -s- because of a preceding long vowel (or diphthong), and therefore a single s in this position marks the preceding vowel as long. The evidence for the quantities of the vowels is to be found in the handbooks¹³, and will be referred to here only for special reasons; but there are numerous examples in which the evidence is scanty or wanting, though these happen not to have great importance.

Among the participles to roots or stems ending in voiceless stops, there are two considerable groups which need not detain us: that in which, despite a long-vowel perfect, and sometimes a long-vowel present also, an original zero-grade vowel appears in the participle¹⁴; and that

¹² As was recognized even by Pott, *Wurzel-Wörterbuch* 1. 88; not accessible to me, but cited by Osthoff 538.

¹³ Conveniently accessible in Bennett, *Appendix to Latin Grammar* 48-50, and *Latin Language* 51-3.

¹⁴ *Dictus*, *ductus*, *factus*, *ictus*, *iactus* (and *epd. am-ictus*), *ē-līxus* ('boiled', to *līquor* 3; short vowel shown by Ital. *lesso* 'boiled meat'; -x- instead of -ct- after

in which a short vowel of the present is carried through the perfect and the participle, either by inheritance or by analogy¹⁵. In a few verbs a long vowel of the present is carried throughout¹⁶. There are three verbs which deserve special attention.

In *pactus* we have the participle to several presents, an old *pacō* 3 or *pagō* 3, which dies out early; *pacīscor* 3, with a perfect *pepigī* or *pactus sum*; and *pangō* 3, with perfect *pēgī*, very rarely *pānxī*.¹⁷ In the compounds of *pacīscor* (*com-*, *dē-*), we find both *-pactus* and *pectus*, which may argue a fluctuation in the quantity of the vowel. In the compounds of *pangō*, the participle never has the weakened vowel, and this retention of *-a-* should argue length; but the present also often retains *-a-*, so that uncertainty exists. Yet it is probable that *pactus* normally has the long vowel; the analogy producing it will be discussed later.

The frequentative verb *lactō* 1 testifies to a verb **laciō* 3, **lactus*, found in several compounds, notably *al- il- pel-licīō*, with perfects *-lexī* (quantity of *e* underterminable) and *-licuī*. That the vowel of the participle is short is shown by the weakening in *al- il- pel-lectus* and in the compounded denominatives *allectō*, *dēlectō*, etc. I call attention to this at this point, since it must be referred to in connection with *legō* 3, *lēctus*.

Finally, the form *relictus* seems, by the testimony of Italian *relitto*, to have the long vowel.¹⁸ As the participle of *relinquō* 3, *reliquī*, it may

-ss- in *assus* 'roasted', cf. association in Plautus, *Most.* 1115, *Poen.* 279), *spectus*, *victus* (to *vincō* 3); *missus*; *aptus* (cf. long vowel in cpd. **co-ēpī*, becoming *coepī*), *ruptus*.

¹⁵ *Doctus*, *frictus* (to *fricō* 1), *nactus* (later also *nāctus*), *ē-nectus* (and rarely *ēnecātus*, to *ē-necō* 1), *sectus* (to *secō* 1); *coctus*; *flexus*, *nexus*, *perus*, *plexus* (these four avoiding identity with *-ct-* of the present, by *-x-* of the participle); *fassus*, *fessus*, *messus*, *passus* (to *patior* 3), *quassus* (*-cussus* in cpds.); *raptus*. Here, and in similar lists, several forms are included which have got their consonant groups by syncope of a short vowel; this has seemed desirable for the sake of completeness.

¹⁶ *Pol-lūctus*; *rēptus*. A few other participles to stems in voiceless stops are mentioned for convenience in later notes: *sānctus* and *vīnctus* in note 19, *sēnsus* and *mēnsus* in note 20.

¹⁷ Neue-Wagener, *Formenlehre der lateinischen Sprache*³ 3. 369-70, cites the forms actually found, calling attention to the fact that *pepigī* by meaning belongs rather to *pacīscor* than to *pangō*.

¹⁸ *Dēlictus*, to *dēlīnguō* 3, presumably has the same quantity of the vowel. But it must be admitted that the length in *relictus*, though highly probable, is not established absolutely, since the Italian derivatives may possibly be merely learned words.

easily have taken the length from the vowel of the perfect, a process of which we shall find other examples.

We come next to the verbs with roots ending in a non-aspirated voiced stop. Several groups of these may be disposed of summarily: those in which the participle has the group *-nct*¹⁹ or the group *-ns*²⁰, before which all vowels are lengthened in Latin; those in which the vowel is long in the present and the length, whether original or extended, appears throughout the paradigm²¹. There remain, with long vowels, *āctus*, *frāctus*, *lēctus*, *pāctus*, *pīctus*, *rēctus*, *tāctus*, *tēctus*; *cāsus*, *ēsus*, *fūsus*, *vīsus*. There are also the following with short vowels: *ricus*, *strictus*; *cessus*, *fissus*, *fressus*, *passus* (to *pando* 3), *scissus*, *sessus*.

With those having short vowels there is little difficulty; the short vowels are to be expected. *Cessus* seems to be for **ce-sessus*. *Fressus*, to *frendō* 3, *frendui* 'to gnash (the teeth)', is accompanied by an alternative *frēsus*²², perhaps by the influence of *ēsus*. *Passus*, with the *-ss-* which appears also in the supine and in the noun 'pace', is commonly replaced by *pānsus*²³, which avoids confusion with the participle of *pator*. *Scissus*, by its short vowel, avoids confusion with the participle of *caedō* in two compounds (*ab-scissus ex-scissus* and *abs-cīsus ex-cīsus*).

¹⁹ *Cīnctus*, *fūnctus*, *iūnctus*, *līnctus*, *pol-līnctus*, *mīnctus* (and *mīctus*, with uncertain quantity), *ē-mūnctus*, *plānctus*, *pūnctus*, *dī-ex-re-stīnctus*, *tīnctus*, *ūnctus*. For convenience, add here *sānctus*, to *sanciō* 4, *sānxī*, and *vīnctus*, to *vinciō* 4, *vīnxī*, with a form distinguishing it from *vīctus* to *vincō* 3, *vīcī*, and from *vīctus* to *vīvō* 3, *vīxī*.

²⁰ *Ac-in-suc-cēnsus*, *abs-cōnsus* (late analogical form for *absconditus*, to *abscondō* 3), *dē-of-fēnsus*, *pre-hēnsus*, *mānsus* (to *mandō* 3), *pānsus* (and older *passus*, to *pandō* 3), *pēnsus*, *scānsus*, *tēnsus* (to *tendō* 3; also *tentus*, which properly belongs to *teneō* 2); these to verbs in *-ndō* 3. *Prānsus*, *spōnsus*, *tōnsus*; these to verbs in *-ndeō* 2. For convenience, add *sēnsus*, to *sentior* 4; *mēnsus*, to *mētior* 4, with *n* after *pēnsus* (Sommer² 610); *mānsus*, to *maneō* 2, for older **mantus*, seen in *mantō* 1.

²¹ *-Cūsus* (to *cūdō*; distinct from *-cussus*, composition form of *quassus*), *fīxus* (to *fīvō* *fīgō* 3, *fīxī*; avoiding *fīctus* to *fīgō* 3, *fīnxī*), *ad-con-in-flīctus*, *frīctus* (and late *frīxus*, to *frīgō* 3; avoiding *frīctus*, to *fricō* 1), *lāpsus*, *lūctus* (to *lūgeō* 2), *lūsus*, *ōsus*, *rāsus*, *rīsus*, *rōsus*, *suāsus*, *sūctus*, *trūsus*, *vīctus* (to *vīvō* 3; on consonantism, cf. Meillet, *MSL* 13.216n.; cf. also note 19, above). In the same category fall *flūctus*, *frūctus* (cf. *frūgēs*), *strūctus*, though the long vowel has disappeared in the present, or a more complicated analogy is at work; cf. Meillet l.c. No problem arises when a diphthong is carried throughout: *autus*, *ausus*, *caesus*, *clausus*, *laesus*, *plausus*, *saeptus*.

²² Neue-Wagener³ 3. 567-8 for citations.

²³ In cpds., *passus* (to *pandō*) is usually retained with unweakened vowel or replaced by *pānsus*; readings with *-pessus* are very dubious, cf. Neue-Wagener³ 3. 550-2.

To these should be added the participle of *tundō* 3, *tutudī*. An old **tussus* is shown by the noun *tussis* 'cough', but it was replaced by *tūnsus* with -n- by analogy to the present. From this, by omission of the weakened nasal, come *tūsus* and *tussus*²⁴, the last merely by manuscript confusion of intervocalic -s- and -ss-.

Where the long vowel stands, it is merely extended to the participles *lēctus*, *pīctus*, *rēctus*, *lēctus*, *ēsus*²⁵, *fūsus*, *vīsus*, from the perfects *lēgī* (in certain cpds., -*lēxī* instead of *lēgī*), *pīnxī*, *rēxī*, *tēxī*, *ēdī*, *fūdī*, *vīdī*. In *lēctus*, the long vowel distinguished from the compounds of **lactus*, already discussed. Five yet remain: *āctus*, *frāctus*, *pāctus*, *tāctus*, *cāsus*.

In *agō* 3, *ēgī*, *āctus*, the ablaut relations²⁶ forbid that *ē* in the perfect should be original; the original perfect was **āgai*, the vowel of which appears in Old Icelandic *ōk*, in the Greek perfect *ἦχα ἡγμαί*, with Attic *η* for original *ā*, perhaps in the Thera perfect *συν-αγάγοχα*. But the semantic kinship to *faciō* 3, *fēcī*, in which the *a:ē* variation is historically warranted²⁷, caused *agō* **āgī* to become *agō ēgī*: not however until after original **actus* had become *āctus*, with the long vowel of that earlier perfect²⁸. From *āctus* to *ēgī*, length went analogically into *frāctus* to *frēgī*, *pāctus* to *pēgī*. In *tāctus*, the long vowel may have been to keep the compounds from confusion with the participle of *tegō*, before *tēctus* had acquired its long vowel from the perfect; for *tangō* and *tegō* have in common four compounds, those with *con-* *in-* *ob-* *prae-*. Or *tāctus* may have got its long vowel by analogy: *frangō frāctus*, *pangō pāctus*, and therefore *tangō tāctus*.

The participle of *cadō* presents an interesting problem, but only because *cassus* 'empty' has not been recognized as its early form. The demonstration of this point I shall leave to a later section of this paper. But the participle **cassus*, in compounds, would become -*cessus*, identical with the participle of *cēdō*, and for clearness a new formation was to be sought. This, as in most similar instances, is got by the lengthening of the vowel, preventing the weakening in the compounds: thus came *cāsus*²⁹.

²⁴ For citations of forms, cf. Neue-Wagener³ 3. 552.

²⁵ Also *com-ēstus*, after *ex-pōtus* (Sommer² 609-10).

²⁶ Cf. Hirt, *Der indog. Ablaut* 147; Sommer² 551.

²⁷ For similar phenomena in Oscan, cf. Buck, *Grammar of Oscan and Umbrian*, §225.

²⁸ A possible alternative to this is the analogy proposed by Osthoff 117; *regō*: *rēctus* = *legō*: *lēctus* = *agō*: *x*.

²⁹ Through *cāssus*, the -ss- of which is certified by Quintilian 1. 7. 20.

Somewhere here in our consideration should come the noun *līctor*, with a well substantiated long vowel³⁰. It is to be connected with a lost **līgō* 3, **līxī*, **līctus* 'to bind'³¹, replaced by *līgō* 1, cf. the variations *dīcō* 3 and *dīcō* 1, *ē-dūcō* 3 and *ē-dūcō* 1. Length has been extended throughout the (lost) verb, and from its participle to similar derivatives, as is true with other verbs of this type.

Coming lastly to the roots ending in voiced aspirated stops, we find certain verbs where length has been carried throughout the paradigm³². Apart from these, the original short vowel persists in *fossus*, *gressus*, *iussus*, *vectus*³³; in *gressus*, the decompounded form has replaced the original **grassus* seen in the denominative *grassor* 1, while from *iussus* the short vowel has displaced the original diphthong of the present and perfect³⁴, giving *iubeō iussī*. In *gaudeō* 2, older **gāvideō*, the participle *gāvīsus* gets its long *ī* by analogy of *videō* 2, *vīsus*³⁵. Similarly, in *dī-vidō* 3, *dī-vīsi*, the participle *dī-vīsus* reflects not only the influence of its own perfect but that of *vīsus*; a semantic parallel helps here, since *cernō* 3 means 'to separate, to distinguish by the eyes, to see', and *discernō* 3 means 'to separate, to divide'. *Fīctus*, to *finqō* 3, gets the long vowel from the perfect *fīnxī*,

In *trahō* 3, *trāxī*, the participle *trāctus* seems to have the long vowel, since it does not change in the compounds, at least ordinarily; the length in the perfect is an adequate basis for analogical lengthening. But the only absolute evidence for the length is the mutilated *trā* . . . for *trācta*, *CIL* 6. 1527. e. 14; and the denominative verb *tractō* and its derivatives frequently have the changed vowel (*aŕ-con-dē-ob-per-re-trectō*) in doublet forms. It may be noted that vowel weakening before *-h* leads to inconvenient and unusual combinations of sounds, and the retention of the vowel in the present may have led to a long vowel in the participle, the better to resist weakening: this process taking place after the formation

³⁰ By Gellius 12. 3.

³¹ Cf. Livy 1. 26. 11 *i lictor, conliga manus*; 8. 7. 19 *i lictor, deliga ad palum*. Also Walde, *Lateinisches etymol. Wörterbuch*, s.v.; F. Muller, *Altitalisches Wörterbuch* 238.

³² *Fīsus* (to *fīdō* 3, with long vowel to avoid *fissus*, to *findō* 3), *nūptus* (Ital. *nozze*, Fr. *noces* with open *o* show contamination with *novicius* 'newly married'; so Körting, *Lateinisch-romanisches Wörterbuch*³ 694, no. 6586), *ē-in-per-vāsus*.

³³ The short vowel of *vectus* is certified by Gellius 9.6. In *pessumdō*, the *pessum* is for **per-dhatom*, reduced to **per-dh-tom* in primitive IE: so Walde s.v., Muller 334.

³⁴ Seen in *ioubeatis* and *iousiset*, lines 27 and 9 of the SCdB (*CIL* 1². 2. 581).

³⁵ So Brugmann *IF* 1. 176.

of the denominative *tractō*. This explanation seems to be favored by the unlike development in *vectus*, which kept its short vowel despite the length in *vēxī*; for the short vowel in *vectus*, before the consonant group, was not subject to weakening, and therefore needed no length to enable it to resist changes.

Finally, the verb *cōnīveō* 2, which has no participle of its own: the root is **kneig^wh-*, becoming Latin *nīv-*, but an old participle **nictus* survives in the denominative *nictō* 1. The verb *nītor* 3 seems to be for **nīvitor*, which explains the *k*-sound in *nīrus*, while the dental of the present explains *nīsus*, through analogy with other dental stems; the long vowel of the present is extended throughout.

What then is the summary of the phenomena? Let us put aside all examples where the verb has a long vowel throughout the paradigm, or has *-nct-* or *-ns-* in the participle: then the participles with un-etymological long vowel are in fact more numerous among the verbs where the root ends in a voiced non-aspirate stop (*āctus*, *frāctus*, *lēctus*, *pāctus*, *pīctus*, *rēctus*, *tāctus*, *tēctus*; *cāsus*, *ēsus*, *fūsus*, *vīsus*), but there are also *gāvīsus*, *dīvīsus*, *trāctus*, from roots in a voiced aspirate, and *relictus*, to a root in a voiceless stop—and perhaps *pāctus* belongs to *pacīscor* as well as to *pangō*. But to formulate a change on a phonetic basis and to limit it to roots with original voiced non-aspirates, excluding those with voiced aspirates, is to set a very precise temporal limit to the phenomenon: the time when in primitive Latin the original aspirates had become voiceless spirants and had not yet become voiced stops—an early period in Latin, yet some of these changes of vowel length seem to be just in progress at the time when written documents appear. Further, in the non-aspirate group, we find 12 longs (or 13, including *līctor*), to 8 shorts (or 9, including *tussis*), and in the aspirate group there are 3 longs and 4 shorts, apart from *cōnīveō* and its kin. The difference is not impressive.

Where there is lengthening of the vowel, it can be explained by analogy in combination with the avoidance of homonyms of divergent meanings. For this reason I regret the appearance of Lachmann's Law, in one or another of its forms, in virtually all the recent handbooks³⁶.

APPENDIX I: In support of the view that a new combination in Italic, consisting of a voiced stop plus *s* or *t*, produced a lengthening of

³⁶ Thus in Niedermann, *Outlines of Latin Phonetics* §26 (English translation of 1910); in Conway, *The Making of Latin*, §108 (1923); in Muller, *Altital. Wrtb.* 382 (1926), to justify the long vowel in *rēctus*.

the preceding vowel when the voiced stop became voiceless, Sommer³⁷ offers two examples in addition to the participles: *māximus* and *adāxim*.

Of these two, *maximus* must be admitted as a new form, containing Italic *-g-s-*, since the superlative *-simus* is a distinctly Italic formation. But the evidence for the length is here limited to a single inscriptional form with the apex, *māx*³⁸, abbreviated for *maximō*, and we can fairly doubt whether this is decisive. Yet even if the vowel is long, it may be by the influence of *plūrimus*, a superlative of related meaning.

As for *adāxim*, the retention of the vowel in the compound, as compared with *fāxim* and *affēxim*³⁹, proves the long vowel, but it may be merely analogical to the participle: *ef-fectus* : *ef-fexim* = *factus* : *faxim* = *ad-āctus* : *ad-āxim* = *āctus* : *āxim*.

The two examples accordingly do not give incontrovertible evidence for the phonetic formulation.

APPENDIX II: On *cassus*, old participle to *cadō*.

The adjective *cassus* is glossed by the *Thesaurus Linguae Latinae*⁴⁰ as 'inanis, vacuus', then in figurative senses as 'vanus, inutilis, irritus, inutilis'. The ancient grammarians derived the word *ab araneorum cassibus* 'from spiders' webs', because they are so often empty; from *quassus*, by corruption of the sounds; from *careo*, as an old participle, against which view Priscian repeatedly objects⁴¹.

But the most probable view is that *cassus* is the participle of *cadō*⁴². The word is found four times in Plautus. One of these is *Pseud.* 371: *inanem quasi cassam nucem* 'empty as a fallen nut'; the penniless young man is in derision taunted with being as empty of money as a fallen nut is empty of meat. Another passage is *Rud.* 1324: *cassam glandem* 'a fallen nut', as type of worthlessness. Horace, *Sat.* 2. 5. 36, speaks of robbing a person of an empty nut, *cassa nuce*, again a type of lack of value. Fallen nuts are likely to be worm-eaten and empty; from this the word *cassus* 'fallen' came to mean 'empty, worthless'. A third passage in Plautus, *Poen.* 360, shows a similar association: *bene promittis multa ex multis: omnia incassum cadunt* 'out of a lot of things,

³⁷ *Hdb.* 2 123.

³⁸ *CIL* 6. 2080. 17.

³⁹ The forms actually found are *adāxint*, Plautus *Aul.* 50; *ecfexis*, Plautus *Cas.* 708, *Poen.* 428; for other examples in fragments and in citations of grammarians, see Neue-Wagener³ 3.514-5.

⁴⁰ 3. 520-3, s.v. *cassus*; cf. also 3. 449 s.v. *careō*, Walde s.v., Muller 75.

⁴¹ 2. 485. 10, 492. 6, 512. 17, 559. 16, 566. 9 K.

⁴² With Osthoff 537-8.

you make fine promises of a lot; they all fall into fallen-ness = turn to nothing'. Cf. also Vergil, *Aen.* 12. 780 *opemque dei non cassa in vota vocavit*; Propertius, 1. 17. 4 *omniaque ingrato littore vota cadent*⁴³, which would surely be *vota cassa* as contrasted with the *vota non cassa* of Vergil⁴⁴.

From the meaning 'empty', *cassus* comes to mean 'bereft of'. A few examples show the development. Plautus, *Aul.* 191 *virginem . . . dote cassam* 'girl empty of dower = without dower'. Lucretius 4. 368 *lumine cassus aer* 'air empty of light = without light'; 5. 719 (*corpus*) *cassum lumine* 'body empty of light = without life'; 3. 562 *cassum anima corpus* 'body empty of life'; 4. 128 (*simulacra*) *cassaque sensu* 'and empty of sense-perception'.

From *cassus* was derived an old verb *casso* 1, found in two or at most three passages. Paul. Fest. 33. 23 Th. has *cassabundus crebro cadens*, which testifies to *cassō* as a frequentative of *cadō*. In Plautus, *Mil.* 850-6, the wine-jars, *cadi*, are spoken of as tottering or being inclined to fall, *cassabant*, since they stood in slippery places:

PA. hoc illi crebro capite sistebant cadi.

LV. non hercle tam istoc valide cassabant cadi;
sed in cella erat paullum nimis loculi lubrici,
ibi erat bilibris aula sic propter cados,
ea saepe deciens complebatur: vidi eam
plenam atque inanem fieri; opera maxuma,
ubi bacchabatur aula, cassabant cadi.

The contrast between *sistebant* and *cassabant* is obvious, as well as the pun which is intended between *cadi* and *cassabant* as derivative of *cado*. The third passage, *Bac.* 305, is uncertain, for *capitibus cassantibus* is an emendation of Ritschl for manuscript *capitibus quassantibus*.

The evidence seems to me adequate that *cassus* is the old participle of *cadō*⁴⁵.

⁴³ But Tibullus 2. 2. 17 *vota cadunt* has the opposite meaning, 'the things-wished-for come to pass, = my prayers are granted', as the context shows.

⁴⁴ The use of *cadere* in reference to hopes, promises, threats, is common. Thus Livy 2. 6. 1 *dolore . . . ad inritum cadentis spei*; 2. 31. 5 *inritaque sicut ante consulis promissa eius caderent*; 6. 35. 1 *haud inritae cecidere minae*; Tac. An. 15. 39 *quae quamquam popularia in inritum cadebant*.

⁴⁵ And not a new participle of *careō* modeled on s-participles like *cēnsus*, *cursus*, *haesus*, after the original participle *castus* had developed a merely adjectival use; despite Walde s.v., Muller 75.

THE LATIN *vī*-PERFECT

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The object of this article is not to add one more hypothesis to the many others that have at various times been advanced to explain the origin of the Latin *vī*-Perfect,¹ but rather to call attention to an old and neglected explanation which seems to the writer so simple and obviously superior to all the vague guesses which are apparently enjoying much greater favor, that it is a source of amazement, e.g. that Stolz-Leumann, *Lat. Gram.*² 335, do not even mention the same in their extensive enumeration of theories and authorities.

On page 502 of Lindsay, *The Latin Language*, we are told that among very unsatisfactory hypotheses is the explanation of the *v*-Perfect 'as a formation on the analogy of verb-stems which end in *v(u)* such as *faveo* from the root *dheghʷ* (*fōvī* being regarded as a Perfect formed in the same way as *fōdī* from *fodio*).' Using a rather more striking example, we could explain *nō-vī* : *nō-tus* (present *nō-sco*) as patterned after *vōv-ī* : *vōtus* < **vov-ito-s*² (present *voveo*).

Although Lindsay does not deem it worth while even to name the author of the hypothesis, and although others neglect to mention it at all, a number of points in which it is superior either to all or to most others immediately present themselves. In the first place, instead of needing to rack our brains for out-of-the-way and subtle explanations, we here find one of such striking simplicity as to offer a very decided

¹No reference is made in this article to the perfects in *-uī*, e.g. *monuī*, for the reason that these are universally admitted to have been derived from the *vī*-Perfect, e.g. *monuī* < **moni-vai*. Cf. e.g. Brugmann, *Gr.* 2.3². 473, Stolz-Leumann, loc. cit.

²This analogy presupposes, it is true, that the dropping of the *v* and the subsequent contraction in *vōtus* are earlier than the first *vī*-perfect. This is, however, by no means an improbable assumption, since *vōtus* was firmly established in the earliest Latin known to us, and since the relative chronology of the various processes that made the language cannot be determined by external evidence. Only if the origin of the *vī*-Perfect is sought in Italic or Indo-European times, would the assumption of these early changes meet with difficulty.

presumption in its favor. Moreover, this process of misdividing a word so as to take a part of the word itself with the ending, and thus create new suffixes, is such a common and well recognized process in case of substantives and adjectives, that we are justified in believing that many verbal formations owe their origin to the same process, even though in actual practice the explanation of verbal forms after this fashion has been very rare. In the third place, it should be obvious that the most convincing explanation of a formation that is purely Latin and cannot be plausibly claimed even for another Italic dialect,³ is that one which starts from other purely Latin material, and not one which tries to establish connections with forms of far removed languages like Sanskrit.

This last consideration militates strongly against several explanations which at various times have been more or less in vogue. That the *v* of Lat. *-vī* should be derived from the *u* of the IE participles perfect in *-ues*⁴ Skt. *-vāñs -vas*, cannot be made credible until more certain traces of this formation than the stereotyped remnants quoted by Brugmann, *Gr.* 2.1.² 570, are found in the Italic dialects, and, more particularly, in Latin.

Hardly better in this respect is the explanation advanced by Fick, *Goett. gel. Anz.* 1883. 594, and accepted, at least in part, by various recent authorities, which sees a connection between the Lat. *v* and the Skt. *u* in the first and third singular of verbs in *ā*, even though at first sight this is borne out by the striking comparisons Skt. *pa-prāú* Lat. *plē-vī* and Skt. *ja-jñāú* Lat. *(g)nō-vī*. However, only at first sight. In the Sanskrit forms the *u* is confined to two persons of the singular, in the Latin the *v* is a tense formative. In the Sanskrit the *u* is found in connection with the regular reduplication, while in Latin not one of the reduplicated verbs shows the *-vī* formation. This is all the more damaging in view of *de-dī* : *dāre* and *ste-tī* : *stā-re*, opposed to Skt. *da-dāú* and *tasthāú*. If these extremely common verbs ever had the *v*, they assuredly would not have given it up; but *vī*-perfect and reduplication would not go together in Latin, and this alone is decisive against seeking the

³R. v. Planta, *Gram. d. oskisch-umbrischen Dial.* 2. 354 ff., believed there were traces of the *v*-Perfect in the Italic dialects. His conclusions have been generally rejected. Cf. e.g. Buck, *Gram. of Osc. and Umbr.* 170.

⁴There are also other objections against the various modifications of this theory. The most decisive is that of Windisch, *Biogr. Jahrb. d. Altertumsu.* 10. 126, who points out that the Skt. participle in *-vāñs -vas* is formed only from old root-perfects, whereas the Latin *vī*-Perfect is predominantly a perfect of derivative verbs, while most of the old verbs of the second and third conjugations do not have it.

origin of the *v* in old reduplicated IE perfects. If now we add to all of this the fact that Skt. *pa-prāú*, etc., are themselves not well understood, that their origin also is a much disputed question, and that in citing them to explain an obscure Latin formation we are introducing another unknown quantity to explain the first, we shall not hesitate to throw overboard this unsatisfactory hypothesis once for all. Cf. also Charpentier, *IF* 32.93 f., for other objections.

The remoteness of the forms and uses of words compared is also a good reason for rejecting the suggestion made by Brugmann, *K. Vgl. Gram.* 546, who thought that aoristic use of the type *vī-vo* alongside of *vī-vo-s* might have been the starting point, comparing particularly *sī-vi-t* : *si-no* with old Lat. *dēsivāre*, and *īvit* with Skt. *ēva-s* 'hasty' and Lith. *per-eivà* 'vagabond.' There is also the additional drawback⁵ that there is no trace of aoristic use of verbs in *-uo-*, and that all verb formations with that suffix function as presents. See Brugmann, *Gr.* 2.3.² 269. ff.

Unquestionably superior in several ways is the theory of Sommer, first presented in the first edition of his *Handbuch der lateinischen Laut- und Formenlehre* 606 ff. Our attention is called to the fact that the oldest perfects in *-vī* show the vowel grade of the athematic strong aorist, e.g. *sē-vī* 'sowed' : *sero satus* reminds one of Gr. *πλήτο* 'was filled'; *sprē-vī* : *sperno*, from the dissyllabic root **sperē*, is like Gr. *ἐτλην* : *τελα-μῶν* (basis **telā-*); *sī-vī* < **sei-vai* has the same vowel grade as Skt. *á-cre-t* IE **e-klei-t*. Since these vowel grades of the Latin occur only in the perfect and cannot be due to analogy, it follows that these Latin perfects are remodelled from athematic strong aorists, e.g. *sē-vī* took the place of **(e)-sē-m*, etc. The next step in Sommer's argument is the assumption that the origin of the *v* should necessarily be sought in this same category of remodelled strong aorists, and that among these its only possible source could be the aorist of **bhū-* **bheu-* 'become', which, fitted out with perfect ending, became **fū-ai* Lat. *fūi* (i.e. **fūvī*) instead of **fū-m*. After this **fū-vī*, as it must have been analyzed, e.g. **sē-m* became **sē-vī*, **gnō-m* became *gnō-vī*, earlier **gnō-vai*.

There is, however, one weak link in this chain of arguments for an otherwise enticing theory. The assumption that the vowel glide (*Übergangslaut*) developed by passing from the *u* to the *a* of **fūai* was psychologically important enough to cause by analogy a complete *u* of full strength in e.g. **sē-vai*, cannot be accepted without further scrutiny,

⁵ Brugmann does not mention this hypothesis in his revised *Grundriss*, apparently having himself rejected it at a later date.

and the burden of proof would certainly lie upon such an assumption. Until this can really be made to appear plausible, it seems improbable that an inorganic sound element, which, since it was not usually written, was not important enough to be generally recognized, could have been the pattern for the distinctly apperceived *v* of *sē-vī* and the like. It would rather seem that Sommer was here operating with two distinct values of the sign *u* or *v*, which probably differed in intensity, or, if not that, were at least different psychically,⁶ since one was apperceived clearly, and the other, often not at all. It is probably this consideration which has resulted in a general adverse feeling toward Sommer's otherwise attractive explanation, and has caused its rejection by most scholars.

The other side of Sommer's argument, the connection of the *vī*-Perfect with the strong aorist, will not of itself disprove any other hypothesis which does not start here. While we must accept the remodelling from old aorists of these particular perfects which he mentioned, it does not yet follow that the *-vī* came from such aorist forms in the beginning. Since the *vī*-Perfect is purely a Latin formation, any verb with *v* of which a perfect was in existence at the time, whether this was a perfect or aorist in origin, could have acted as a pattern for the others. The very fact that even in Sommer's line of argument the aorist **bhū-m* was fitted out with a perfect ending when it became **bhūyai*, shows that by all means the origin of the Latin perfect is to be sought after the time of syncretism with the aorist. If this is the case, any old perfect form may have acted as pattern.

Turning once more to the neglected explanation of the *vī*-Perfect from words with *v* in the stem, we come upon a paradoxical state of affairs. While we find among others *vōvī* : *voveo*, *mōvī* : *moveo*, *cāvī* : *caveo*, *lāvī* : *lavo*, *jūvī* : *juvo*, forms which seem strikingly superior as patterns to *fū(u)ī* (e.g. *nō-vī* : *nōtus* after *vōv-ī* : *vō-tus* or *mōv-ī* : *mōtus*), they have been almost universally rejected. The cause of this is apparently the obsession, accepted in all hand books, that these forms were all old *vī*-perfects and lost their second *v* by phonetic processes. Thus in Brugmann 473, *lāvī* is derived from **loya-yai*, although *o-a* (cf. *cōgo* < **co-ago*) otherwise contracts to *ō* instead of *ā*. Stolz, like Walde, *Et. Wörterb.* s. v., derives *mōvī* and *vōvī* from **moxyeyai* **xyoxyai* through **moxoyai* **xoyoyai* and **mooxai* **xooxai*. Sommer on the other hand derives *mōvī* from **moxiyai* and *cāvī* from **caxiyai* by syncope of the

⁶See Sapir in *LANGUAGE* 1.37 ff.

i., i.e. through **moŷŷai* **caŷŷai*, comparing *maior* pronounced *maïor*, similarly *lāvī* and *jūvī*. Not content with this, even *solvī* : *solvo* and *volvī* : *volvo* are brought under the favorite category of the *v*-Perfect by assuming **solu-ŷai* and **volu-ŷai*⁷ as the original forms.

Against this it may be said that it is the height of improbability that awkward forms like **moŷŷai* were ever established unless there was no other recourse, unless the only possible formation was the *vī*-Perfect, which of course no one could seriously maintain in view of the many simple perfects⁸ in existence at all times. If any one should be prone to think that the fact that these words are second conjugation verbs would speak for the *vī*-Perfect, it is necessary only to refer to *vīdī* from *video*, *līquī* from *liqueo*, *to-tondī* from *tondeo*, not to mention *s*-perfects like *man-sī* from *maneo*. The reason that we find such a large group of perfects like *mōvī* from *moveo* need certainly not be their origin from the *vī*-Perfect, but is much more probably the avoidance of awkward forms with two successive syllables beginning with a *v* when the older simple perfect was on hand as an unobjectionable formation.

Nor is there much to be said in favor of deriving *mōvī* from **moŷŷai* otherwise. The mere fact that this form and some others may thus be derived without conflict with known phonetic laws is far from being a proof that they actually did thus originate, and for others again (e.g. *lāvī*) it is extremely doubtful that there is no such conflict. It is true

⁷ It is hard to find anything in favor of this assumption, and it is due merely to a wish to bring as much as possible under the category of the *vī*-Perfect. If in *fū(u)ī* the *u* was a phonetic development (Übergangslaut), then it would appear reasonable that it was the same in *voluī* = **voluŷī*, but strangely enough the former appears in Sommer as the pattern for the *vī*-Perfect, whereas the latter is supposed to be an example of the fully developed category which lost its *u* and became a simple perfect secondarily. Equally difficult it is to see why the change from *soluī* to *solvī* should be any different from that of *soluō* to *solvō*. The burden of proof clearly rests upon any one who assumes that the glide *u* of *solu(u)ō*, *solu(u)ī* and *fu(u)ī* were not all alike, and until the supposed differences in treatment are convincingly explained, it is decidedly more probable that *solv-ī*, *volv-ī* and *calv-ī* never were anything else than simple perfects.

⁸ That it is hard to determine to which IE category many a Latin simple perfect goes back, whether they are derived from IE perfects or aorists, is no reason for trying to squeeze as many as possible into the category of *vī*-perfects. Since the syncretism between perfect and aorist was completed in the Italic period (Brugmann, *Gr.* 2. 3². 467 ff.), many an old Latin perfect was formed or remodelled after that time, so that the question could not even be asked with propriety. It is not necessary e.g. to know what IE category *vōv-ī* or *volv-ī* perpetuate, since whatever their original form, they were subjected to analogical influences of other simple perfects of diverse origin after the syncretism of the two tenses had taken place.

that the long vowel of these perfects would thus be explained (*mōvī* opposed to *moveo*), but it will appear presently that this is by no means the only possible explanation. If now we can find other explanations that are at least equally convincing, the only respectable support for deriving *mōvī* from **moyiui* has been lost, so that the only stumbling block to the recognition of these forms as the patterns for the *vī*-Perfect may be removed.

The first plausible source for the long vowel in these perfects is the same as for a number of other perfects not ending in *-vī*, sc. *ōdī* : **odio*, *fōdī* : *fodio*, and *scābī* : *scabo*. These Sommer also (598 f.) believes may have been formed by analogy to the inherited vowel gradation of the frequent type *ēdī* : *edo*, *ēmī*, *emo*, *sēdī* : *sedeo*. In later times after the monophthongization of diphthongs, *vīdī* : *video* and *fūgī* : *fugio*⁹ offered further patterns. Now if *ōdī* and *fōdī* can be analogical creations, then also *mōvī* : *moveo*, *vōvī* : *voveo*, and *fōvī* : *foveo* can be such, and if *scābī* can, so can *lāvī* : *lavo*, *fāvī* : *faveo*, and *cāvī* : *caveo*. In case of *cēvī* : *ceveo* this would be still easier because of the large number of patterns like *ēdī* : *edo*. As to *jūvī* : *juvo*, it is of no use to speculate whether it yielded to the analogy of the more frequent verbs with *e*, *o*, and *a*, or whether the long *ū* represents an original diphthong.

The question might be asked why these verbs with long analogical vowel in the perfect should be so frequent when the verb stem ends in *v*, and so rare otherwise. To this there are two answers. In the first place, not every verb of the type *ēdī* : *edo* inherited its vowel gradation from IE times, but many were formed after the inherited patterns, i.e. they were themselves analogical formations. In other words, the number of verbs in other stem-finals than *v* which received their long vowel in the perfect by analogy is undoubtedly larger than it appears, since only those instances are generally admitted which cannot be explained easily in any other way. But even for the preponderance of verbs in *v*, such as it is, there is an easy and convincing explanation. The long vowels in the perfects of some of these verbs, which were the patterns for the others, were partially at least due to the analogy of the passive participles with long vowels, where they were due to contraction. After **moyitos* had become *mōtus*, **moyitos vōtus* and **foyitos fōtus*, the long vowel also crept into the closely associated perfect active,

⁹Since these changes were comparatively late, they could have affected only some of the latest verbs with analogical long vowel in the perfect, but not the older ones which were the patterns for the earliest *vī*-perfects.

so that *mōvī*, *vōvī*, and *fōvī*¹⁰ resulted. On the other hand, e.g. *lāvī* : *lavo*, *lautus* yielded to the double analogy of verbs of the type *vōvī* : *voveo* and *ēmī* : *emo*.

After we have convinced ourselves that there is no cogent reason for deriving the type *mōvī*, *cāvī*, *volvī* from the *vī*-Perfect, we have removed the only possible objection to these verbs themselves as the source of the *v* of *nōvī* : *nōtus* (*nōsco*), *crēvī* : *crētus* (*crēsko*), etc. It will however add something in the nature of a positive proof if we can find a number of close associations in form or meaning or both between some of the perfects of which the *v* belongs to the verb stem and others of the oldest strata of genuine *vī*-perfects like *nōvī* or *strāvī*, in which the difference between present and perfect stems is a guarantee that they are not the latest products of analogical formation.

In the first place, from the verbs *moveo*, *voveo*, *foveo* we have, as repeatedly cited above, *mōv-ī*, *vōv-ī*, *fōv-ī*, alongside of the passive participles *mōtus* (< **moϕi-tos*), *vōtus*, *fōtus*. These are so close formally to (*g*)*nōv-ī* alongside of (*g*)*nō-tus*, that no analogy can be more probable than that *mōvī* : *mōtus* etc. induced (*g*)*nōv-ī* : (*g*)*nō-tus* (pres. (*g*)*nō-sco*). In addition to this formal association there was association of meaning between (*g*)*nōv-ī* 'know' and *vōv-ī* 'wish', a meaning of the latter alongside of 'vow, pray for', which may easily be old enough for the association presupposed. Cf. e.g. Ov. Met. 9.128 *quae modo voverat odit* 'what he recently wished for he now hates'. Semantically also *cāv-ī* : *caveo* 'be on guard, beware' is related to *nōv-ī* 'know', but although this may have been a contributing factor, the formal association of (*g*)*nōv-ī* with *mōv-ī*, *vōv-ī* and *fōv-ī*, alongside of the semantic association with *vōv-ī*, was no doubt the deciding influence. From *vōv-ī* 'wished' and *cāv-ī* 'was aware of' to *scīv-ī* 'knew' is also only a small step semantically, but we may suspect that because of the closer association between *nōv-ī* and *scīv-ī*, the latter was patterned after the former rather than after the older *vōv-ī* or *cāv-ī*. Reverting to another member of the *-ōv-ī* group, *mōv-ī* 'moved' was so closely related in meaning to the congeneric *īv-ī* 'went' (: *eo*) and to its semantic opposite *quīēv-ī*¹¹ 'rested': *quīē-sco*, that we may well conclude that it was their pattern.

¹⁰ With the recognition of this origin of these perfects disappears the necessity of explaining why we scarcely find them in contracted form, a question which occurred to Sommer, 608. Association of e.g. *vōv-ī* with *vove-o* would prevent **vōsti* as a parallel form to *nōsti*:*nōv-ī*.

¹¹ In all such instances it is not meant that perfects of these verbs were formed for the first time under the influence of associated words. Usually no doubt older

A group of four perfects in *-āv-ī*, *cāvī* mentioned above, *lāv-ī* : *lavō* 'bathe, wash', *fāv-ī* : *faveō* 'be well disposed', *pāv-ī* : *paveo* 'fear', were evidently the patterns for the form of *nā-vī* : *nō*, *nāre* 'swim', *flā-vī* : *flō flāre* 'blow', *pā-vī* : *pāscō pāscere* 'feed'. It is to be observed that in this group the formal association was less close than in the *mōv-ī* group, since here the passive participles were of no assistance, for we find *cautus*, *lautus*, *fautus* as opposed to *flātus* and *pastus*, while *nō* does not have the form at all. This probably means that the perfects in *-ā-vī* were not as early as those in *-ō-vī*, where the participles *mōtus*, *vōtus*, *fōtus* offered a starting point and point of contact with *nōtus* to *nōvī nōsco*. However after (g)*nō-vī* had once been formed, it was easier to form also *nā-vī*, *flā-vī*, and *pā-vī* because the influence of *nō-vī* was now added to that of *cāv-ī*, *fāv-ī*, *lāv-ī*, and *pāv-ī*. Probably also the fact that *pā-vī* 'fed' and *pāv-ī* 'feared' were completely homonymic may mean that the former was formed under the influence of the latter. Of course semantic association was at work in the *-āvī* group also. From *lāv-ī* 'washed, bathed'¹² to *nā-vī* 'swam' is only a small step. Or again, when *lāv-īt* 'washed' was used of the rain, it was congeneric to *flā-vīt* 'blew' when applied to the wind, and may well have assisted in the formation of the latter. At other times *lāv-ī* is used of bathing with tears (cf. Plaut. *Ps.* 10), and in this use, with one's face as object, it is synonymous with *flē-vī* 'wept' : *fleo*, so that it may be credited with being an influence in the formation of the latter. Turning to *fāv-ī* 'favored, befriended', it seems to be, together with *fōv-ī* 'warmed, fostered, favored, supported' a pattern for *pā-vī* : *pāscere*, which is often used in the sense of 'cherish, cultivate'. These same two perfects were the semantic opposites of *sprē-vī* 'spurned, despised' : *spernere*, and were partial factors in the formation of the latter.

One perfect in *-āv-ī*, sc. *jāv-ī* 'helped, assisted, benefited' : *juvō*, may have been of influence semantically in the genesis of the *vī*-Perfect. Being closely akin to *fāv-ī* and *fōv-ī*, it may have assisted the latter in the formation of *pā-vī*, although only as a minor factor.

Whether *cō-nāv-ī* 'shut the eyes, blink' was a formal factor in the

perfects were thus merely remodelled and fitted out with a *v*. We may well believe that **quiē-m* once upon a time existed, and that this became **quiē-ai* after syncretism of aorist and perfect. It was the latter form that was, under the influence of *mōv-ī* and *ī-vī*, to become *quiē-vī* (**quiē-vai*).

¹² It is the intransitive use of *lāv-ī*, as early as Plautus (e.g. *Truc.* 322), which made possible the association with *nāre*.

creation of perfects in *-ī-vī*, like *scī-vī*, cannot be decided. At any rate it must have been a minor factor.

It is self-evident that every new form in *-vī* could itself become at once a pattern for others. After a group of perfects in *-vī* from presents in *-scō* had been formed, this category of formally associated forms caused other verbs in *-scō* to form their perfects in the same way, e.g., at an early date, *crē-vī* : *crē-scō* after *quīē-vī* : *quīē-scō* and *pā-vī* : *pā-scō*. Similarly, among verbs with present in *-nō*, e.g. *sprē-vī* : *sper-nō* brought after itself *decrē-vī* : *decer-nō*, *strā-vī* : *ster-nō*, *sī-vī* : *si-nō*. After *flē-vī* : *fleō* was patterned *plē-vī* : *pleō*, these being the only two Latin mono-syllabic verb stems in *ē*.

A review of all these verbs mentioned certainly reveals a surprising and complex series of associations between the common perfects of the *mōv-ī* type and the confessedly oldest strata of real *vī*-perfects. There is hardly one of the latter that does not have one or more close associative connections either directly with perfects in *-vī* from verbs with stem ending in *v*, or with other verbs that have such associations. This is a fact which cannot be explained by any other theory of the origin of the *vī*-Perfect. If *vōv-ī*, *lāv-ī*, etc. were themselves originally *vī*-perfects, they must have been among the latest rather than the earliest of these forms; for, as was pointed out above, the awkward repetition in monstrous forms like **moyīyai* would have been allowed only after the *vī*-Perfect had become so nearly universal that there was practically no other way but to take with resignation even that climax of cacophony **yoyīyai*. But, granting that they existed, there is then absolutely no reason why all of these associations mentioned should exist between the earliest *vī*-perfects like *(g)nō-vī* and the perfects of the *vōv-ī* type, which were in that case far removed chronologically. These connections can be explained only by the theory that *vōv-ī*, *mōv-ī*, *lāv-ī*, and their group were simple perfects with root vowel lengthened by analogy, and that these verbs through the numerous associative connections mentioned, acted as patterns for the earliest strata of real *vī*-perfects. After a nucleus of the latter was once formed, the rapid spread of the formation was a foregone conclusion, since the initial consonant of the suffix caused it to be welcomed as an easy device to avoid the awkwardness of hiatus or of obscuring sound changes in all perfects formed from stems ending in a vowel.

CAN OLD FRENCH *caroler* BE OF CELTIC ORIGIN?

MAX FÖRSTER

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In LANGUAGE 4. 28-30, Prof. U. T. Holmes tries to show that some native Celtic word must have had some part in the etymology of *caroler* 'to dance a round dance'. He refers to a Welsh *coroli* 'to move in a circle' and to a Welsh *corol* (or *corawl*) 'circular'. But I doubt whether sufficient authority can be found for either of these words.

It is true that Owen Pughe mentions a Welsh *coroli* 'to move in a circle; to dance; to caper', and that he derives this word from the adjective *corawl*. But every Welsh scholar knows that Pughe is absolutely untrustworthy, and that he often invented the words he adduces. Silvan Evans, the author of our largest Welsh Dictionary (1887), is unable to give any other reference for the word but Pughe. And, therefore, the critical dictionary of Anwyl (1914) has dropped the word altogether.

There is certainly no authority for the other Welsh word which Prof. Holmes adduces: *corol* 'circular'. There is a Welsh adjective *corawl*, but this never occurs in the meaning of 'circular'; it means only 'choral', as in Welsh *gwasanaeth corawl* 'choral service' and *gwyl gorawl* 'a choral festival'. Both form and meaning of this word make it clear that it is a borrowing from medieval Latin *chorālis* 'belonging to a choir; sung by a choir'. It cannot possibly be derived from Welsh *cōr* 'circle',¹ as Prof. Holmes seems to assume.

So the assumed, but non-existent Welsh *corol* 'circular' and *coroli* will hardly give any support to a theory of a Celtic parentage of OF *caroler*.

There are, however, some Celtic words which may be connected with OF *carole*, viz. Modern Welsh *carol* 'a song' and *caroli* 'to sing', Old Cornish *carol* 'a choir', Middle Welsh *corelw* 'a dance' and *corelwi* 'to dance', Modern Breton (Vann. and Corn.) *koroll* 'a dance' (Middle

¹ Morris-Jones (159) takes this to be a native word; but Latin *chōrus* also would become *cōr* in Welsh—and not **cur*, as Prof. Holmes assumes—because Welsh borrowings from Latin are of such an early date that they do not partake of the Vulgar Latin lengthening of vowels in open accented syllables. See J. Loth, *Les mots latins dans les langues brittoniques* 106, and Pedersen §122.

Breton *coroll*), and *korollat* 'to dance', Scottish-Gaelic *coirioll* 'a carol', Manx *carol*, *carbal*, *carval* 'a Christmas song' (Kelly). But all these words are clearly borrowed—directly or indirectly²—from OF *corolle*, *carole*, *carolle*, *kerolle*, *queroile* (see Tobler-Lommatzsch, *Altfranzösisches Wörterbuch*, II. 47, Berlin, 1926), which means 'a round dance with the singing for it'. Holmes admits this for the forms with *a*, but Breton *coroll*, he thinks 'must be derived from something else'. But we must not overlook that the same vacillation between *a* and *o* is to be found also in the Romance languages: OF *corolle* beside *carole*, Modern Provençal and Italian *carola* beside Old Provençal *corola* and Swiss Romance *coraula*. And so I see no difficulty in deriving the Breton and Middle Welsh forms with *o* from the French, too.

Under these circumstances I take it to be safer to look for a Latin etymology of *carole*. And, as far as I can see, a Vulgar Latin **chöreola* (Meyer-Lübke, No. 1884), from Latin *chorea* = Greek *χορεία* 'a round dance', would answer for it fairly well.

That the OF *carole* 'had a Celtic flavor and tradition to a Frenchman of the year 1155' is said to be evident from a passage in Wace's *Brut*, where the stone-circles of Stonehenge are called '*karole as gaians*' (line 8384). But this is an echo from Geoffrey of Monmouth, who, in Book xi, ch. 4, mentions *Stānheng* as a *Lapidum structuram*, i.e., 'a megalithic building'. In other places (viii 10, 14, 16, 24) he calls such a *lapidum structuram* a *chorea gigantum*, evidently mistranslating his native Welsh *cor y ceuri* 'circle of the giants' by Latin *chorea gigantum* 'dance of the giants' since Welsh *cor* means 'dance' as well as 'circle'. Some Latin texts of the *Historia Regum Britanniae* seem to have applied the term *chorea gigantum* also to the *lapidum structuram* at Stonehenge. This we may conclude from the fact that the Middle Welsh translation of the *Historia* (The Bruts from the Red Book of Hergest, ed. Rhys and Evans, p. 233) applies the term *o vywn y gor y kewri* 'amidst the circle of the giants', also to Stonehenge, as a translation of the Latin *intra lapidum structuram*.

* * * * *

In reply Professor Holmes writes:

The gist of my note on O. Fr. *carole* was to show that a Breton form of the Celtic root *cor* 'circle' so influenced the semantics of Latin *coraula*, an attested word, that *coraula* acquired the sense of 'round dance' or

² Some of these forms may be taken from the English.

'circle'. Professor Foerster, in his criticism, has not discussed the above Latin etymon but merely stated that he prefers **choreola*. It is also evident that he does not believe in a Celtic word *cor*, other than as a borrowing from the Latin *chorus*.

In the latest number of the *Revue Celtique*,¹ which has appeared since the writing of Professor Foerster's note, M. Joseph Loth, the eminent Celticist, devotes over nine pages (272-81) to *cor* as a native Celtic word. Among other meanings he discusses those of 'cercle, réunion, communauté, cimetière, cercle de tombes' (273, 274), and expressly denies here the influence of Latin *chorus* save in the sense of 'choeur d'église' (275, 274). With regard to **choreola*, Meyer-Lübke, whom Professor Foerster cites, goes on to say, '[this] Erklärung ist wegen des Geschlechtes zweifelhaft, auch müsste man eine gelehrte Bildung, etwa der Klosterschulen annehmen' (*Etym. Wörterb. d. rom. Spr.*, no. 1884). The name of this popular dance would be then partly learned. Of the etymology *coraula* > **coraulare* Meyer-Lübke says, '[This] ist nur möglich, wenn das Wort von Nordfrankreich aus gewandert ist' (*ibid.*). This latter supposition causes little difficulty in view of the history of such northern French words as *olifant*, *chevalier*, etc., which spread with their northern phonology into Provence and Italy. Professor Foerster himself helps to substantiate the *coraula* etymology when he cites Swiss Romance *coraula*. This could come from Lat. *coraula* but not easily from **choreola*.

The existence of these two forms, *coraula* and Celtic *cor* 'circle', are all that I really need for the discussion of my etymology. In demonstrating this I used the intermediary forms Welsh *coroli* 'to dance' and Breton *coroll*, the latter in particular. It was Joseph Loth who made the statement, long before me, that *coroll* was not derived from French *carole*.² The same authority gives O. Pughe as sole evidence for the Welsh verb *llafru* 'to breech';³ so I can not believe that Pughe, even where he has material not in the other lexicons, is always utterly untrustworthy. To be frank I can not see that a bare statement of fact either way will prove much concerning these words. The presence of *coroli* and *coroll*, corresponding so exactly, in unrelated circumstances, and to be derived so regularly from the root *cor* in meaning and word formation, causes me to see no reason and little profit in explaining them away. How and why did Pughe coin *coroli*? It might be suggested that *coroli*

¹ 44, nos. 3-4.

² *Les Mots latins dans les langues brittoniques* 145 (Paris, 1892).

³ *Rev. Celt.* 44.305.

was coined from *corelwi*. This I can not understand phonetically, nor am I so certain that *corelwi* is a borrowing from English *carol* or French *carole*.

The explanation given by Professor Foerster of how Geoffrey of Monmouth's *lapidum structuram* became in Wace:

Breton les solent *en bretans*
Apeler Karole as gaians

is not entirely clear to me. Granted that Wace remembered seeing *chorea gigantum* elsewhere in Geoffrey and considered *carole* as a French equivalent of *chorea*, why would he call the expression Breton, unless he knew of a Breton word similar to these—the *cor* in question, or some derivative form such as I suggest? *Chorea gigantum* is intelligible Latin.

BOOK REVIEWS

Indogermanisches Jahrbuch. Im Auftrag der Indogermanischen Gesellschaft herausgegeben von ALBERT DEBRUNNER und WALTER PORZIG. XI. Band, Jahrgang 1926/27 (Bibliographie der Jahre 1924/25). Pp. 661. Berlin und Leipzig: Walter de Gruyter & Co., 1927.

With this volume the bibliographies in the various fields of Indo-European linguistics are finally brought up to date as far as the nature of the material permits. The volume consists of an article on *Besinnung der Sprachwissenschaft*, by G. Ipsen (1-32); bibliographies, with the usual divisions (33-553); personal notices, business notices, etc. (554-601); index of authors (602-59); abbreviations (660-1).

American scholarship is represented by at least fifty names, two thirds of them being members of the Linguistic Society. It is to be regretted that Maurice Bloomfield is not distinguished from Leonard Bloomfield in the index, nor E. H. Sturtevant from A. M. Sturtevant. English names seem to give great trouble to continental bibliographers; it would be desirable for all bibliographers to make a study of the systems of names in different countries.

All scholars in linguistics will rejoice that with this volume the bibliographies are at last brought up to date. Volume 12 will cover the literature of 1926, and may be issued by the time of this review. It is to be hoped that sufficient support for this invaluable enterprise will be got, to ensure its continuation.

ROLAND G. KENT

Etymologisches Wörterbuch der europäischen (germanischen, romanischen und slavischen) Wörter orientalischen Ursprungs. Pp xix + 243. By KARL LOKOTSCH. Heidelberg: Carl Winter's Universitätsbuchhandlung, 1927.

A compendium of the many words of Oriental origin borrowed by the various languages of Europe has long been needed; for though much had been done for individual languages and groups of languages (notably for Spanish and Portuguese), this work was widely scattered and was of unequal value. Such a compendium has been essayed by the author of the book under review, and it may be welcomed as conveniently assem-

bling much of the data in readily accessible form. In the nature of the case, relatively little of the material here presented is actually new; but the author has added a very considerable number of Oriental loan-words in Rumanian—no less than fifty-six in the first four hundred rubrics. He has cited previous works with commendable fullness, although he has completely ignored at least one noteworthy collection—S. R. Delgado's *Glossário luso-asiático* (2 vols., Coimbra, 1919-21), which gives not merely words, but excerpts from Portuguese literature containing them, quite on the model of the well-known *Hobson-Jobson* of Yule and Burnell. Albanian, in which 1180 of the 5140 words listed by Meyer in his *Etymologisches Wörterbuch der albanesischen Sprache* are Turkish in origin, is excluded from the author's consideration, perhaps justly; but some attention might well have been given to Modern Greek, and much might have been gleaned with profit from Miklosich's *Die türkischen Elemente in den südost- und osteuropäischen Sprachen* (griechisch, albanisch, rumänisch, bulgarisch, serbisch, kleinrussisch, grossrussisch, polnisch) in the *Denkschriften* of the Vienna Academy of Sciences (phil.-hist. Classe, xxxiv 239-338; xxxv 105-92; xxxvii 1-88; xxxviii 1-194, Vienna, 1884-90).

On the other hand, the author seems not entirely at home in a number of Oriental languages, and occasionally he fails to cite the latest or best authorities. Furthermore, his index of Oriental words is unhappily incomplete, for though it lists Arabic, Assyrian, Hebrew, Malay, and Syriac, it does not record Chinese, Japanese, Persian, or Indian (whether Sanskrit, Prākṛit, or Modern), which are of equal value in any consideration of his problem.

The following *corrigenda* have been noted by the reviewer:

No. 3: *ševos* is not from a Phoenician word, but from Egyptian *hbni* (Boisacq, *Dictionnaire étymologique de la langue grecque* 211).

No. 20: the source of *Eden* is Hebrew עֵדֶן (Gen. ii, 8, etc.), not Arabic *'adan*.

No. 122: on Persian *āstār* 'coarse thin stuff for lining' (Armenian loan-word *astar*, 13th cent.) see Hübschmann, *Persische Studien* 7, where Horn is corrected.

Nos. 126, 1311: read *āspānāǵ*, not *āspānāḥ*; and *lāž(u)wārd*, not *lāžwārd*.

No. 157: Arabic *ward* 'rose' is borrowed from Iranian (Avesta *varəda* 'plant'; cf. the loan-words Armenian *vard*, Syriac *vardā*).

No. 171: derivation of the group of French *bacasse* from Arabic *baǧīya* 'adulteress' is considered and rejected by Meyer-Lübke (no. 861).

No. 276: for Persian *bāt* (not *bāt*; cf. the Armenian loan-words *bat*, *bad*, and the Syriac borrowing *baṭṭā*) see Hübschmann 30. Spanish *pato*, etc., agree rather with Albanian *pate*, Serbian, etc., *patka*, Friulian *patòne* 'goose' (Meyer 324); and the source both of *bāt* and of *pate* is very doubtful.

No. 390: *čampaka* is Sanskrit rather than Malay, which borrowed it (cf. *Hobson-Jobson* 218).

No. 398: read 'Rad', not 'Bad'.

No. 434: for Persian *čōgān* see also Hübschmann 53.

No. 484: Persian *dāng* seems not to be recorded; the only form is *tāng*.

No. 876: on Persian *ḥudā* see the exhaustive discussion by Bartholomae, *Beiträge zur Kenntnis der mitteliranischen Mundarten*, iii, Heidelberg, 1920.

Nos. 1052, 1647: Arabic *ḵandī* is of Indian origin (*Hobson-Jobson* 155-6), and the English spelling is *candy*, not *kandy*; also *blouse*, not *blouze*.

No. 1075: whatever the etymology of Sanskrit *karabha* 'camel' (also 'elephant's trunk, young camel or elephant'), it certainly does not mean primarily 'possessing swiftness' (for the formative *-bho-* in terms for animals see Brugmann, *Grundriss*² II i 389-90); and it is scarcely connected with Persian (and Pahlavi) *kāravān* (Armenian loan-word *karavan*; cf. Hübschmann 85). The etymology of *kāravān* itself is doubtful; but the word may possibly be connected with Persian *kār* 'work, business' plus the formative *-vān(ah)* 'relating to' (cf. Darmesteter, *Études iraniennes* i 286, and *Century Dictionary*, s.v. 'caravan').

No. 1096*: French *carcan*, etc., are scarcely borrowed from the Orient, but, as the reviewer hopes to show in a study to appear in the near future, are derived from the wide-spread Indo-European base **qerqo-*, **qorqo-* 'neck'.

No. 1398: the interpretation of Hebrew *mān* (not *manā*) as מַה הוּא 'what is it?' (Ex. xvi, 15; LXX τί ἐστὶ τοῦτο; similarly the Vulgate) is a late Aramaism (*Oxford Hebrew Dictionary* 577).

No. 1417: *meerschaum* is apparently a translation of French (*pipe*) *d'écume de mer*, which is itself a popular etymology of (*pipe*) *de Kummer* (the name of the maker of this type of pipe; Vendryes, *Le Langage* 213).

No. 1478: for the Kōṅkaṇī language see *Linguistic Survey of India*, vii 61-216.

No. 1523: the Mozarabite rite is in Latin, not Arabic.

Nos. 1830, 1831, 1894, 1928, 1929, 1930, 2012: read *śanipriya*, *śaṅkha*,

śūnya, *samana*, *śramaṇa*, *śṛgāla*, *śṛṅgavêra*, and *tāmrika* instead of *saniprija*, *sankha*, *sūnya*, *śamana*, *śramaṇā*, *śṛgāla*, *śṛṅgavêra*, and *tamrka*.

No. 1849: the Persian form is *šāhwār*, *šulwār*, not *sālwār* (see Horn, no. 789), and connexion with Avesta *sraonay-* (Persian *surūn*) 'buttocks', Sanskrit *śrōṇay-* 'hip' is unthinkable. The author's Sanskrit *saravara* seems not to be recorded in any Sanskrit dictionary. See also *Hobson-Jobson* 832-3.

No. 1927: connexion of French *sot*, etc., with Neo-Hebrew *šōte* seems highly improbable. The Hebrew word is not particularly common, and the source of *sot*, Spanish and Portuguese *zote* is still most safely to be regarded as unsolved (cf. Meyer-Lübke, no. 2454).

The following English words might be added in the rubrics noted: *shal(l)ot* (119), *balas* (151), *barbican* (197), *damascene*, *damaskeen* (476^b), *damson* (476^a), *sorghum* (551), *fustian* (621), *camlet* (653), *genet* (685), *gauze* (702, 1147), *ghoul* (741), *julep* (742), *halberd* (823), *harmel*, *harmaline* (829), *henna* (867), *antimony* (918), *alcove* (1221), *kohl* (1227), *curcuma* (1247), *macaw* (1340), *madras* in America as a term for cotton shirting with the colour in pattern woven through (1345), *nacre* (1546), *parvis* (1631), *percale*, *percaline* (1632), *rebeck* (1675), *xebec* (1740), *serge* (1878), *zero* (1894), *timbal* (1971), *Blighty* (2162), *jennet* (2192).

On the whole, the work gives the impression of having been compiled without that minute care which so difficult a study as that of loan-words demands, and it should be used, one must fear, only with caution and with control from other sources. It is not the number of errors noted above—for errors are inevitable in dictionaries of every kind—but their type, which renders the book disappointing as a whole.

LOUIS H. GRAY

Système de la Syntaxe Latine. Pp. 428. By A. C. JURET. Publications de la Faculté des Lettres de l'Université de Strasbourg. Fascicule 34. Paris 1926.

This is a labor of learning and originality, the planning and composition of which must have cost an enormous amount of thought. One cannot but approve the leading idea, namely that the point of departure in syntactic analysis ought to be the thought or thing expressed, rather than the frequently vague or ambiguous word or word-group, even though this view is not altogether novel. I welcome further a classification of linguistic phenomena in terms of function, even though the results are occasionally as startling as for example to find 'but' in such a phrase as 'no one but knows' defined as a negative relative pronoun

(NED); and so I am not shocked at reading (162) 'le sujet se met au génitif' (but I doubt in the particular instance *Ubi nunc Vicae Potae est*, if the genitive is actually the subject, for Livy was certainly not talking of Vica Pota herself being present, but only of the location of her shrine), or, 'le sujet est au datif' (163), although I wonder if a sharper line might not be drawn between the general subject of thought and the particular subject of expression. Interesting also are the observations collected (393-9) under the caption 'Caractères généraux du système de la syntaxe latine'. Finally, the very effort itself to recast in a new pattern the facts of Latin syntax is meritorious, and the results obtained will no doubt give the specialists many an occasion to rethink their favorite problems. These ought, therefore, not to pass this book by, even though it may occasionally require a little patience to find just what one is looking for.

And here I begin to touch some points at which I boggle a little. The index is so meagre that it even omits entirely such topics as 'indirect discourse', 'sequence of tenses', 'objective genitive', 'vocative', and the like. To be sure there is (401-420) an extensive *Table des Matières*, but you must have fairly well mastered the *système* before you can quickly find here what you want. Thus I discovered the objective genitive eventually under '2° partie . . . 3° section . . . B. Non-subordonné: Adjectif ou substantif . . . V. Le substantif dépendant d'un substantif . . . 2° Rapports de dépendance comme auprès d'un verbe: génitif ou autre cas. a. Rapport de sujet et d'objet': but then, because I had to review the book anyway, I followed the somewhat unsportsmanlike, and, as a general thing, scarcely practicable, method of beginning at the first page and working steadily through until I got what I was looking for. The analysis is carried pretty far by sub- and sub-sub-classification, so that on page 198 one achieves what amounts to 2 I Ch. VI B II 1° γ 2, which by the way appears in the *Table* as 2 I Ch. VI C 1° $\gamma\beta$; and here I touch upon another ground for a little grumbling. The *Table* does not correspond exactly with the text either in symbols or in captions, thus a little further complicating matters. Now in the growing quantity and complexity of scientific literature it seems to me important that one who has new material to present should also take pains to avoid confusing his readers or demanding too much of their time.

In general procedure, one is brought up with a start by the very first paragraph which insists that syntax must not be separated from morphology, but one soon finds that nothing very revolutionary is intended.

For I do not now recall any grammar which in actual practice departs so far from morphological classification. Again, while the psychological approach is properly emphasized in the introduction, it is logic, and that, it must be confessed, sometimes a bit formal and arid, which is overwhelmingly in evidence in the text. Furthermore, I can hardly understand how any but a historical presentation is any longer possible for the scientific syntax of a language with so long and so well-known a history as is that of Latin. Yet the historical explanation is rather rarely offered and the traditional point of view is pretty uniformly retained, that, namely, in which Cicero and Caesar occupy the foreground as norm, while pretty much everything else is merely old, poetical, post-classical, or else *peu classique* or *non classique*. Of course I have no quarrel with such procedure in an ordinary school grammar, but this book is hardly that, or else I am much mistaken. For a young student who has learned the elements of the language in a morphological arrangement can hardly help but be confused by a logical classification quite dissociated therefrom. Besides, a pretty fair knowledge of grammar seems to be presupposed by some terms. Thus we have on page 114: '4° Type *iudice quo nosti populo*', but this particular construction is cited only half a page lower down at the very end of the section, and then apparently as but a 'construction analogue' to the first four examples given, and as differing also slightly, it seems, from even the last two sentences immediately preceding. Occasional inaccuracies of statement like 'l'indicatif futur, qui, il est vrai, était primitivement un subjonctif' (40), which can hardly be true of the future in *b*; or of citation, like the ascription of the *Bell. Hispan.* to Caesar (88-9), are not numerous enough to be characteristic, for the scholarship seems in general to be sound.

And now this notice has already become so long that there is no more room to discuss particular syntactical doctrines of the author. That is, however, since circumstances have occasioned so long a delay, not particularly important, since I should but repeat in general, with other illustrations, the ground covered so well by Marouzeau in the *Rev. des Ét. Lat.* 5. 100-3 (1927) and Williams in the *Class. Rev.* 41. 143-4 (1927), although the latter's remarks seem to me to be couched occasionally in unnecessarily energetic language. All in all Juret's attempt was certainly worth making once, even though I should be surprised if grammars in the future pattern after it. For my own taste I am still inclined to prefer writing like Kroll's lucid and stimulating pamphlet *Die wissenschaftliche Syntax im lateinischen Unterricht* (1920), or the admirable

revision of Schmalz by J. B. Hofmann, which has just issued from the press.

W. A. OLDFATHER

Portucale: revista ilustrada de cultura literária, científica, e artística. Volume I, No. 1, Janeiro-Fevereiro de 1928. Porto (Portugal): Rua dos Mártires da Liberdade, 178, Pp. 56.

We greet with pleasure the first issue of *Portucale*, a bi-monthly journal devoted to the linguistic, literary, and artistic interests of Portugal, and edited by Augusto Martins, Cláudio Basto, and Pedro Vitorino. The present number represents all these fields. Several short articles, notes, and reviews deal with matters of language. Among these is an interesting note by our fellow-member Dr. Basto, on the use of *Kentúcky* in Portuguese to mean a certain kind of pipe tobacco; the label reads *Kentucky em fio*. The word may denote also cigars made of this tobacco. Elsewhere in the issue Dr. Basto's volume on *A Linguagem de Camilo* is favorably reviewed.

Specialists in Portuguese language and literature will find this journal very valuable.

ROLAND G. KENT

Lições de Filologia Portuguesa, 2a edição (melhorada). Pp. xxv + 502. By J. LEITE DE VASCONCELLOS. Lisbon: Oficinas Gráficas da Biblioteca Nacional, 1926.

This work contains Professor Leite's lectures on Portuguese linguistics from 1903 to 1909, each of the six parts representing the lectures of one year. The first edition had been out of print six years when the second appeared. In view of the value of the work, it is unfortunate that the second edition is only a reprint of the first with a few minor changes and additions. A systematic arrangement of the subject matter would have been welcome.

EDWIN B. WILLIAMS

De los nombres de Puerto Rico. By ANTONIO S. PEDREIRA. Reprinted from *Revista de Estudios Hispánicos* 1. 18-33 (1928).

We greet with pleasure the appearance of a new learned periodical, *Revista de Estudios Hispánicos*, edited by Professor de Onís of Columbia University, from which this article is reprinted. Professor Pedreira discusses the various names borne by the island where he is a professor in the official university: *Boriquén*, *La Isla de San Juan*, *La Cíudad de*

Puerto Rico, and finally *Puerto Rico*, officially changed by the United States Board of Geographic Names to *Porto Rico*. Professor Pedreira, after valuable citations of sources for the history of the name, enters a protest against the change to *Porto*, a non-Spanish form, and considers the chief reason given by the Board, greater ease of pronunciation in English, not to be valid, especially as the same Board has accepted such names as *Puerto Princesa*, *Puerto Cabello*, etc.

But *Puerto* is indeed subject to mispronunciation, the first syllable being likely in the mouths of the uninitiate to rime with *sure* or *sewer*. And no local pride should be offended by the alteration, since the better-known places are those which have variations in their names in different languages: witness *España*, transformed to *Spain*, *Espagne*, *Spagna*, *Spanien* in English, French, Italian, German respectively, and the similar variations for *New York*, *London*, *Paris*, *Firenze*, *Wien*. No; it is a mark of insignificance and unimportance to keep a too difficult spelling and pronunciation when the name is adopted: *Porto* is the hallmark of the standing of *Porto Rico* and *Puerto* is that of the lack of standing of *Puerto Princesa* and the others.

ROLAND G. KENT

The Name of Oglethorpe. Pp. 63. By JOHN MORRIS. Bulletin of the University of Georgia, Volume XXVIII, Number 1a, January 1928. Studies I, No. 12. Reprinted from *The Georgia Historical Quarterly*, XI, Nos. 3-4.

James Edward Oglethorpe, 1696-1785, was the founder of the state of Georgia, and everything that concerns him is of interest to Georgians, even to the etymology of his name. The name, in older spellings, is found in the *Domesday Book* and in the *Calendar of Charter Rolls*, and Moorman asserts that the first element is the Old English personal name *Acwulf*, *Aculf*, *Acolf*, found in the *Liber Vitae* of Durham and in the *Domesday Book*. Professor Morris proceeds to show that this is a wrong understanding of the name; that the name *Aculf* is really Scandinavian *Ácúlfr*. This he demonstrates by an abundance of examples, giving incidentally a large number of derivations of English family names. On the other hand, *thorp* is equally at home in Scandinavian and in Anglo-Saxon (Old English), and Professor Morris seeks to prove that in this name it is Scandinavian, by showing that in a great number of names it is associated with a prior element of Scandinavian origin. Our opinion is that he has proved his thesis.

The historical side of the sketch is also of much interest. But lin-

guistically, the point of importance is that English owes much more to the Norse invasions of the ninth century, than is generally realized. Very many words were identical at that time, in the two languages, and we may in reality be using Norse words when we fancy that we are speaking 'pure Anglo-Saxon'.

ROLAND G. KENT

Louisiana Place-Names of Indian Origin. Pp. 12 + 72. By WILLIAM A. READ. (University Bulletin: Louisiana State University and Agricultural and Mechanical College. Vol. xix, new series, No. 2.) Baton Rouge, Louisiana, February, 1927.

In this pamphlet, Professor Read has given the origin of 114 names of places and rivers in Louisiana, that are or seem to be of American Indian origin. Most of these come from the Choctaw, a few from Caddo, a very few from other dialects. The words are arranged alphabetically; all pertinent information is given, with some historical sidelights.

Apart from the special interest which this study has in Louisiana itself, it illustrates the immigration of names: business firms and individuals bestow place names from their former homes; railroad authorities select names for new stations according to personal likings. Thus we note here *Chautauqua*, *Chenango*, *Genesee*, from New York; *Tioga*, from Pennsylvania or New York; *St. Tammany*, from the Delaware Indian Chieftain; *Nottoway*, *Powhatan*, *Roanoke*, *Weyanoke*, from Virginia; *Tallulah*, from Georgia; *Coochie*, shortened from *Witlacoochee*, Florida; *Oshkosh* and *Wauksha*, from Wisconsin; *Winona*, from Minnesota; *Wyandotte*, from Canada. *Acadia* marks the immigration from Nova Scotia; the name is, in Professor Read's opinion, a Micmac word, perhaps contaminated with classical *Arcadia*. *Aloha* is the Hawaiian word, selected by railroad officials as a name for a village on their line.

In a few names we find popular etymologies. *Bayou Funny Louis* is really Choctaw *fani* 'squirrel' + *lusa* 'black'. *Pin Hook*, now officially, renamed to *Lafayette*, was perhaps for Choctaw *pinashuk* 'linden, basswood'; but there is a tradition—probably aetiological—that a French restaurant keeper at this place was in 'the habit of catching his neighbors' chickens with the aid of a grain of corn on a bent pin, which he tied to a long string and tossed out of his window'. *Santa Barb* is derived from Choctaw *sinti bok* 'snake creek'. *Whiskey Chitto Creek* is from Choctaw *uski* or *oski* 'cane, canebrake' + *chi(t)* 'large', therefore equals *Big Cane Creek*. *Adois* is despite its orthography locally pro-

nounced *adiós*, by confusion with the Spanish word of farewell. *Tunica* is not Latin, but the name of an Indian tribe; the name was changed to *Wilhelm* in 1906, in honor of the Kaiser, but was changed back to *Tunica* in 1918.

Every such treatise as this is serviceable, not merely for the local use to which it is destined, but for general linguistic purposes, if we do but cull from it the material which interests us.

ROLAND G. KENT

Union List of Serials in Libraries of the United States and Canada. Edited by Winifred Gregory. New York: The H. W. Wilson Co., 1927.

This volume contains a complete list of periodicals in 186 libraries in the United States and 6 libraries in Canada, and a partial listing of those in 34 other libraries in the United States. It enables a scholar to locate any volume of any journal which is not locally accessible. Journals which first appeared in 1925 or later, are not included, but must wait presumably for a supplement.

This project has been sponsored by the American Library Association, and is not a money-making enterprise. Three previous partial lists are combined in the present volume, which has about 1500 pages, weighs nearly ten pounds, and is quite as large as the ordinary unabridged dictionary.

Scholars in linguistics, as well as those in every other field, have reason to be grateful for this compilation.

ROLAND G. KENT

NOTES AND PERSONALIA

MAURICE BLOOMFIELD died on June 13, 1928, in San Francisco, where he had been living for the last year in the company of his son.

Ill health had prevented his attendance at any of the meetings of our Society; but for it he was a Signer of the Call, a Foundation Member, its second President, and a source of wise counsel, encouragement, and inspiration at all times. We may, indeed, go farther and recall that one of his *obiter dicta*, 'There is pathos in that comparative philologists in America have neither independent association nor special organ of publicity' *TAPA* 50. 83 (1919), played its part in the conception of the Society.

The life of a scholar is apt to run a simple course in its relations to the outside world, and to this rule Bloomfield's life was no exception. In the *Studies in Honor of Maurice Bloomfield* (New Haven: Yale University Press, 1920) published by his pupils in commemoration of the fortieth anniversary of his doctorate, the facts are set down with appropriate detail. Here it must suffice to recall the barest outline: his birth in Bielitz, Austria (Feb. 23, 1855), his coming as a child to America, his studies both in this country (University of Chicago, Furman University, Yale University, Johns Hopkins University), and in Germany (Berlin, Leipzig), and finally his call in 1881 to the Department of Sanskrit and Comparative Philology in the Johns Hopkins University; and further to record from the later years of his life two facts: his second marriage in 1921 to Miss Helen Scott of Baltimore, and his retirement after forty-five years of service in 1926, as Professor Emeritus of Sanskrit and Comparative Philology.

As a teacher Bloomfield continued a tradition that has passed with him—the combining of the problems of Indology with those of Indo-European grammar and with those of general linguistics. His courses in the two latter fields—in which during his career hundreds of pupils were enrolled—caused his influence to be unusually wide, until it penetrated into every sphere of linguistic activity in America as well as into many other branches of humanistic work. How extraordinarily stimulating it was will be attested by all who were privileged to sit under him. The qualities that made it so defy analysis; but, looking back, one

might single out as the thing that impressed one first his manner of expression. Perhaps rightly; for in his case, certainly, the style was a true reflection of the individuality of the man. It was simple and direct, luminous in its clarity, and with a power almost uncanny of seizing the right phrase, that in spite of its simplicity and clarity was never commonplace. Later and by degrees one came to realize the enormous breadth and depth of his knowledge, the steadfast persistence of his efforts to increase it, the wonderful fertility of his imagination, ever devising new problems and new methods for their solution, his resolute determination to push every problem to its end, the clarity of thinking with which this was done, and the extreme rigor of self-criticism to which each of his ideas was subjected. The wonder is that he did not as an unapproachable ideal overwhelm his students and crush out their initiative. The saving factors were the kindly interest, the helpful advice, the warm sympathy, with which he encouraged their efforts, the absence of all attempts to force his own ideas upon others, and the wise tact that kept his guidance from passing into control. His interest in his scholars did not cease with their graduation, but continued to follow them, the result being that the tie between pupil and master grew into an intense and lasting bond such as is rare under modern conditions.

A bibliography of his writings is given in the *Studies*, to which gleanings and a continuation may be added as follows:

- 1911 Article 'Cerberus', in Hastings' *Encyclopaedia of Religion and Ethics*, Volume 3.
- 1914-6 Articles (not specified in the preface, but certainly including that on the Veda) in the *New International Encyclopaedia*, 2d edition.
- 1916 Article 'Literature, Vedic and Sanskrit', in Hastings' *Encyclopaedia of Religion and Ethics*, Volume 8.
- 1920 On overhearing as a motif of Hindu fiction. *AJP* 41. 309-35.
- 1921 The Hittite language. *JAOS* 41. 195-209
On a possible pre-Vedic form in Pāli and Prākṛit. *JAOS* 41. 465-6.
- 1922 Note to W. N. Brown's 'The Silence Wager stories'. *AJP* 43. 317.
- 1923 The Śālibhadra Carita, a story of conversion to Jaina monkhood. *JAOS* 43. 257-316.
The art of stealing in Hindu fiction. *AJP* 44. 97-133, 193-229.
Review of *The Cambridge History of India*, Volume 1. *AHR* 28. 727-8.

- 1924** On false ascetics and nuns in Hindu fiction. *JAOS* 44. 202-42.
 Joseph and Potiphar in Hindu fiction. *TAPA* 54. 141-67.
 On Vedic Agni Kravyavāhana and Agni Kavyavāhana. *Streitberg Festgabe* 12-4.
 Some aspects of Jaina Sanskrit. *ANTIΔΩPON*, *Festschrift für Jacob Wackernagel* 220-30.
- 1925** Philology. *Johns Hopkins Alumni Magazine* 14. 4-10.
 On a case of suppletive Indo-European suffixes. *LANGUAGE* 1. 88-95.
 Review of Neisser's *Zum Wörterbuch des Rgveda*. *JAOS* 45. 157-72.
 Article 'Sanskrit' in *The Encyclopedia Americana*.
- 1926** On organized brigandage in Hindu fiction. *AJP* 47. 205-33.
 On Vedic *dhénā*, prayer, song. *JAOS* 46. 303-8.
- 1927** Indo-European *ozdos*, Greek *ōzōs*, Germanic *asts*, etc. *LANGUAGE* 3. 213-4.
 Foreword [on the projected 'Encyclopedia of Hindu Fiction Motifs'] to Volume VII of N. M. Penzer's *Ocean of Story* (re-edition with notes etc. of Tawney's translation of the *Kathā Sarit Sāgara*).
- 1928** The home of the Vedic sacrifice. *JAOS* 48.
- Not yet published: *Vedic Variants*. It is hoped that this work will appear as a collection of monographs on variants in the repeated materials of the Vedic literature, under such headings as Phonetics (including Sandhi), Noun Formation, Noun Inflection, The Verb, Pronouns, Particles, Order of Words, etc. (In Collaboration with Franklin Edgerton.)

His achievements are probably greatest in the field of Indology, where he stands unquestioned as the first of all Atharvanists and in the foremost rank of interpreters of the Vedas in general. To it he has bequeathed a gigantic tool, the *Vedic Concordance*, unmatched in its usefulness to future investigators, save for the *Petersburg Lexicon* alone. It is a monument to his insight into the needs of Vedic study, his patient industry, his willingness for self-sacrifice, and his talent for organization. His achievements in this field, however, belong more properly to others, and will no doubt be commemorated appropriately in the *Journal* of the American Oriental Society.

It is as a linguist that he belongs to us. In this field his studies fell at a peculiarly fortunate time—towards the close of the seventies of the last century, the decade of the great discoveries that led to the rebirth of Indo-European grammar and of general linguistics. It was he, more

than any other, who brought the seeds of these new sciences to this country and worked for their dissemination. The bibliography, especially for the earlier years, bristles with discussions of special problems in Indo-European grammar that have made his name familiar to the readers of its handbooks. Noun Formation was the subject of his dissertation and a topic in which he never lost interest; witness his article *On a Case of Suppletive Indo-European Suffixes*, *LANGUAGE* 1. 88-95 (1925); one of the latest of his publications and one too that shows well, even though on a relatively small scale, the technique of his approach to such problems and his peculiar powers of exposition. The calling of due attention to the processes of adaptation and assimilation in congeneric classes of words¹ is perhaps his outstanding achievement in general linguistics. But by its side, for the interpretation of literary speech-forms at least, must be put the novel points of view presented in his article *On Instability in the Use of Moods in Earliest Sanskrit*. These have been elaborated with endless patience for detail into a voluminous work, *The Vedic Variants*, which still remains unpublished. The value of its contribution to the understanding of every Vedic text is simply incalculable; and yet, to recall a phrase once wrung from him, its pasilingual aspect is the more important. The best tribute we can pay to his memory is to do all within our power to see that this child of his imagination and labor does not perish.

WILLIAM GARDNER HALE, a Foundation Member of the Society, died on June 23, 1928, at his home near Stamford, Connecticut.

He was born at Savannah, Georgia, on February 9, 1849, and received his university training at Harvard (A.B. 1870), Leipzig, and Göttingen. He was Tutor in Latin at Harvard University, 1874-6 and 1877-80; Professor of the Latin Language and Literature at Cornell University, 1880-92; and Professor and Head of the Department of Latin at the University of Chicago, from 1892 until he became Professor Emeritus in 1919.

His special interest was in the syntax of Latin, as may be seen from the titles of his most important writings: *The Art of Reading Latin* (1887); *The Cum-Constructions, their history and functions* (1887-8); *The Sequence of Tenses in Latin* (1887-8); *The Anticipatory Subjunctive in Greek and Latin* (1894); *Hale-Buck Latin Grammar* (1903; jointly with C. D. Buck); *First Latin Book* (1907); *The Manuscripts of Catullus* (1908). He was associated in an editorial capacity with the *Classical*

¹ 'Haplology' is his own coinage, and better English than its would-be correction.

Review, 1895-1907; *Classical Quarterly*, from 1907; *American Journal of Archaeology*, 1897-9; *Cornell University Studies in Classical Philology*, 1887-92; *Classical Philology*, from its foundation in 1906. He was Chairman of the Board of Directors of the American School of Classical Studies in Rome, 1894-9, and its first Director, 1895-6. He served from 1910 to 1913 as Chairman of the Joint Committee for the Harmonizing of Grammatical Nomenclature. He was a member of the American Philological Association from 1882, and its President in 1892; of the English Classical Association, of which he was Vice-President in 1907. He was an Honorary Member of the Cambridge (England) Philological Society, and a Corresponding Member of the Archaeological Institutes of Berlin, Athens, and Rome. His distinguished scholarship was recognized by the honorary degree of LL.D. from Union University in 1895, from Princeton in 1896, from St. Andrew's in 1907, and from Aberdeen in the same year.

THE NEXT MEETING OF THE SOCIETY will be held in New York, at Columbia University, December 26 and 27, in connection with the annual convention of the American Association for the Advancement of Science. Members who plan to present papers are requested to send their titles and abstracts as early as possible to the Secretary of the Society, that advantage may be taken of the Association's arrangements for publicity.

THE FIRST INTERNATIONAL CONGRESS OF LINGUISTS was held at the Hague, April 10-15. Neither of the LINGUISTIC SOCIETY's delegates was able to be present, but Professor Boas, as President of the Society and one of its delegates, sent a cablegram of greeting to the Congress, and Dr. R.-M. S. Heffner, a member of the Society, attended the meetings. From his account and from the official report of the Congress we draw the following:

The Congress voted to effect a permanent organization, administered by a Secretary General and ten other members as Permanent International Committee. The Congresses shall, in principle, be held every three years; the Committee shall designate the place of meeting and a President of the Congress, who shall organize a local committee, to cooperate with the permanent committee in arranging the Congress. The Permanent Committee, as chosen at The Hague, consists of Professor Schrijnen of Nijmegen (Secretary General), and Professors Bally of Geneva, Boas of New York, Brockelmann of Breslau, Jespersen of Copenhagen, Daniel Jones of London, Karlgren of Göteborg, Kretschmer of Vienna, Meillet of Paris, Rozwadowski of Krakau, Trombetti of Bologna.

The Proceedings of the Congress, to be issued in French, were entrusted to the editorial supervision of Professors van Ginneken of Nijmegen, van Hamel of Utrecht, and Salverda de Grave of Amsterdam.

The Congress approved, for presentation to the various governments and the proper committees of the League of Nations a request for coöperation, as follows:

The linguistic condition of the world is far from being known adequately for the needs of science; many languages and dialects are on the way to extinction and risk disappearing before they are recorded. The Congress unanimously considers that it is a part of the duty of all governments to organize a study, as complete as possible, of the languages and dialects of all the countries under their rule. A simple and quick method is to send into a certain number of localities of the regions to be explored investigators furnished with a questionnaire to be translated into the speech of each of the localities. The answers can be presented in a cartographic representation; thus there will be secured the elements for the first linguistic atlas of the world. But for a complete idea of the inner nature and functioning of the languages, it is necessary to gather also original texts in each of the dialects considered, and so far as possible phonographic records. The Congress has appointed a committee to attend to the execution of these propositions and to hold itself at the disposition of the governments and the investigators, to help in giving to the investigation the necessary unity.

This Committee consists of Professors Boas, Meinhof, Rivet, Jaberg, Schmidt, Sommerfelt, Jacovlef.

The Congress addressed also a request to the *Institut de Coopération Intellectuelle de Paris*, to consider and to investigate in what way the indexing of linguistic works and the bibliographies in the same field may be brought into a reasonable degree of uniformity; the answers secured by the *Institut* to be submitted to the Permanent Committee of the Congress, for coördination and report at the next Congress.

The Congress decided in favor of the foundation of a *Revue Internationale de Phonétique*, with central offices in Paris, under the direction of Professor Pernot; an editorial committee of nineteen members was appointed. By special vote of the Congress, this *Revue* is to include also publications of closely allied fields, and special mention was made of a *Bulletin de Phonétique Experimentale*.

To this account of the Congress, we may add that at the time of the meeting an *International Society of Experimental Phonetics* was founded, of which Professor E. W. Scripture, Strudelhofgasse 4, Vienna, Austria, was elected President; its object is the promotion of scientific research in experimental phonetics, of which a *Bulletin* (apparently that mentioned at the end of the preceding paragraph) will be issued from time to time. The membership fee for 1928 is \$1.25; applications for membership should be sent to Professor Scripture.

The PRIMO CONGRESSO INTERNAZIONALE ETRUSCO was held as planned at Florence and Bologna, April 27 to May 4, with Dr. A. Minto as President and Emilio Burci, Rector of the University, as Honorary President.

The paper of greatest interest to linguists was A. Trombetti's *Per l'interpretazione dei testi etruschi*, an analysis of parts of the Zagabria mummy wrappings which he interprets as describing a *lectisternium*. To be mentioned also are papers by G. Devoto in which it was argued that the Italic element in Etruscan cannot constitute a substratum, but is only an infiltration; by C. F. Lehmann-Haupt on the relation between the Etruscans and the pre-Armenian Chaldaeans; and by F. Schwachermeyer, *Tomb-forms in Asia Minor and Etruria*, maintaining that the Etruscans migrated from Asia Minor in two great waves and that relations between the two regions continued until about B.C. 750.

One of our delegates, Professor Joseph William Hewitt, was in attendance and has forwarded a glowing account of the magnificence of the setting of the Congress, the lavish hospitality of its hosts, the popular enthusiasm aroused, and the cordial pledges of support for these studies made by the Italian government.

THE PATH OF PURE SCIENCE, in the unremunerative fields, is always beset with difficulties of a financial nature. It is for this reason, and from a desire to promote the interests of linguistic science, that we feel impelled to call attention here to a number of organizations in which linguistic scholars are vitally interested.

THE LINGUISTIC SOCIETY OF AMERICA has entered into friendly affiliation with two societies engaged in the same field, *Die Indogermanische Gesellschaft* and *La Société de Linguistique de Paris*. The former of these issues a well-known annual, *Indogermanisches Jahrbuch*, the eleventh volume of which is briefly reviewed elsewhere in this issue of LANGUAGE; this is a bibliography which is indispensable to every serious student in Indo-European linguistics, but its very continuance is threatened by the small number of subscribers. Applications for membership in the Gesellschaft, with subscription to the Jahrbuch, should be directed to Prof. Dr. A. Debrunner, Landgrafenstieg 5, Jena, Germany, Secretary of the Gesellschaft and an Honorary Member of the Linguistic Society. The annual subscription is tentatively fixed at 16 Marks per annum.

Another Honorary Member of the Society, Professor A. Meillet, 24 rue de Verneuil, Paris, is Secretary of the Société de Linguistique, the *Bulletin* of which contains articles and reviews in all fields of linguistics. Application for membership will gladly be transmitted to Professor Meillet by the Secretary of the Linguistic Society; annual dues are

fixed at \$4 for members outside of France, who desire to receive the publications.

There is urgent need of additional subscriptions to the Italian periodical, the *Rivista Indo-greco-italica*, which is issued at Naples under the brilliant editorship of Professor Francesco Ribezzo of the University of Palermo. One of its noteworthy features is the prompt publication of epigraphical discoveries on Italian soil, in which it often anticipates the official *Notizie degli Scavi*; but there appear regularly in its pages also articles dealing with other parts of the Indo-European field, as well as book reviews and bibliographical notes. The subscription is 100 lire per annum.

We note also the newly founded International Society of Experimental Phonetics, mentioned in connection with the first International Congress of Linguists, and the new journal *Africa*, the official organ of the International Institute of African Languages and Cultures, 22 Craven Street, London, W.C.2, the first issue of which appeared in January of the present year. *Africa* is sent to all members of the Institute in return for the annual dues of One Pound Sterling.

Those who cannot themselves subscribe to any of these publications, will do well to see that the libraries of their institutions become subscribers.

Finally, our Honorary Member Prof. Dr. Ferdinand Sommer writes to us of the newly established Indogermanisches Seminar at Munich, and speaks of its lack of means for the purchase of books and journals; he would welcome the sending of any linguistic publications for the use of the Seminar. We cordially recommend to our members and to their friends to send any books, articles, reprints of linguistic nature to the Seminar in care of Professor Sommer, Ludwigstrasse 22, München, with the assurance that these gifts will be welcome.

The Committee on Publications has accepted two additional manuscripts for publication in the series of LANGUAGE DISSERTATIONS: *Latin Parens, its meanings and uses*, by Merle Middleton Odgers, and *Studies in the Syntax of the Gathas of Zarathushtra, with text, translation, and notes*, by Maria Wilkins Smith. Both of these are University of Pennsylvania dissertations.

Dr. Odgers is Assistant Director of Admissions and Assistant Professor of Latin at the University of Pennsylvania, having been promoted this year from an instructorship in the same subject. Dr. Smith, who has been devoting herself exclusively to graduate studies, begins this month her duties as Instructor in Latin at Temple University.

Miss Charlotte Townsend Littlejohn, a Foundation Member and a Benefactor of the Society, was married on June 23, at Southampton, Long Island, to Mr. Edward Norris Rich Jr. of Baltimore.

Edward Y. Lindsay, Instructor in Latin at Lehigh University, has accepted a call to the University of Vermont as Assistant Professor in Latin.

Albert Morey Sturtevant, Associate Professor in the University of Kansas, has been promoted to be Professor of Germanic Languages and Literatures in the same institution.

Edward Yoder, Professor of Greek and Latin at Goshen College, Indiana, goes this month to Hesston College, Hesston, Kansas, with the same title. Dr. Yoder received the degree of Ph.D. at the University of Pennsylvania in June, and his dissertation will appear shortly as No. 2 of the series of LANGUAGE DISSERTATIONS of the LINGUISTIC SOCIETY.

Aurelio M. Espinosa, Professor of Spanish at the Leland Stanford Junior University, will be visiting professor at Wellesley College this autumn, from September to December, conducting graduate and advanced undergraduate courses in the Spanish Drama Novel and the Spanish Epic, with particular attention to Spanish Ballads. During the first half of January he will be at Havana, Cuba, on invitation of the Centro Cultural Cubano, to deliver a series of lectures on the Spanish language, literature, and folklore.

Henry Grattan Doyle, Professor of Romance Languages and Dean of Men in The George Washington University, Washington, D. C., has been appointed consulting editor of *Italica*. He has also recently been appointed a 'Current History Associate', and will contribute the monthly review of events in France to *Current History*. He has been for several years assistant managing editor of the *Modern Language Journal* and an associate editor of *Hispania*.

Truman Michelson, Professor of Ethnology, Edward H. Sehrt, Professor of German, and H. G. Doyle, Professor of Romance Languages, are cooperating this year in a general linguistic course in The George Washington University, Washington, D. C. This is in addition to the regular graduate courses in their respective fields.

Dr. E. A. Speiser, who has been for the last two years at the American School of Oriental Research in Baghdad, as Guggenheim Fellow, has accepted a call to the University of Pennsylvania as Assistant Professor of Semitic Languages, succeeding Professor Edward Chiera, who has gone to the University of Chicago.

Frederic T. Wood received the degree of Ph.D. at Princeton University in June, with Indo-European Philology as his major subject, and will spend the next academic year in study abroad, mainly in Leipzig, specializing in Lithuanian, in which field lay his doctoral dissertation.

Francis Palmer Clarke, Instructor in Philosophy in the University of Pennsylvania, received the degree of Ph.D. at that institution in June.

Milman Parry, who has been studying for two years at the Sorbonne as holder of an American Field Scholarship for French Universities, has received the degree of Docteur-ès-Lettres, his dissertation being on *L'Épithète Traditionnelle dans Homère* (Paris, Société d'Éditions "Les Belles Lettres", 1928; 242 pp.). He has accepted a position as Professor of Latin at Drake University, Des Moines.

Since the last published list of new members, and up to June 23, the following persons have been received into membership in the Linguistic Society:

- Dr. Emile Boisacq, 271 Chaussée de Vleurgat, Ixelles-Bruxelles, Belgium.
(Professor of Sanskrit and Comparative Philology in the University of Brussels)
- Prof. Tom Peete Cross, University of Chicago, Chicago, Ill. (Comparative Literature)
- Mr. Murray B. Emeneau, Box 1910 Yale Sta., New Haven, Conn.
(Classics, Yale Univ.)
- Prof. Gilbert Malcolm Fess, 1322 Wilson Av., Columbia, Mo. (French, Univ. of Missouri)
- Prof. Willem L. Graff, Arts Bldg., McGill Univ., Montreal, Canada.
(Germanic Languages)
- Frank Hawley, Esq., 56 Stanley Street, Norton-on-Tees, Durham, England.
- Prof. T. Atkinson Jenkins, 5411 Greenwood Av., Chicago, Ill. [(French Lang., Univ. of Chicago)]

Prof. Hayward Keniston, Univ. of Chicago, Chicago, Ill. (Spanish Lang.)

Miss Florence M. Newham, 137 W. 69th St., New York City. (Etymology of medical and biological terms)

Mr. Allan Lake Rice, 4217 Osage Av., Philadelphia, Pa. (Germanics)

BOOKS RECEIVED

Under this heading will be acknowledged such works as seem to bear on 'the advancement of the scientific study of language'.

The publicity thus given is regarded as a full return for the presentation of the work. Under no circumstances is it possible to comply with the requests being made by certain publishers for the return of books not reviewed quickly.

Reviews will be published as circumstances permit. Copies of them will be sent to the publishers of the works reviewed; and it is hoped that they will then send a second copy to replace the one which will have become the property of the reviewer.

For further bibliographic information consult the annual list of Exchanges.

Acta Philologica Scandinavica; Tidskrift för Nordisk Sprogforskning 3. 1-96 (1928).

Altenglisches Lesebuch für Anfänger. Pp. x + 69. By MAX FÖRSTER. (Germanische Bibliothek, ed. W. Streitberg.) Heidelberg: Carl Winter, 1928.

American Speech 3. 261-439 (1928).

Anthropos; Ephemeris Internationalis Ethnologica et Linguistica 23. 1-394 (1928).

Biblica 9. 1-256 (1*-32*) 1928.

Bibliographie Américaniste; extrait du *Journal de la Société des Américanistes de Paris*, nouvelle série 19. 439-554 (1927).

La Cultura 7. 193-288 (1928).

Het emphatisch gebruik van relatiefpronominale uitgangen in het Blackfoot. By C. C. UHLENBECK. Reprint of Festschrift P. W. Schmidt 148-156.

English Studies 10. 33-96 (1928).

Gnomon; kritische Zeitschrift für die gesamte klassische Altertumswissenschaft 4. 65-232 (1928).

A Grammar of the Portuguese Language. Pp. 669. By JOSEPH DUNN. Washington: National Capital Press, 1928.

Hispania; a Journal devoted to the Interests of Teachers of Spanish 11. 205-294 (1928).

Italica; quarterly Bulletin of the Am. Ass. of Teachers of Italian 5. 1-50 (1928).

Journal and Proceedings of the Asiatic Society of Bengal; new series 22. I-CLXXIV, 93-233, 325-420 (1927-8).

The Journal of the Polynesian Society 37. 1-112 (1928).

Leuvense Bijdragen; Tijdschrift voor Moderne Philologie 19. 41-112 (1927).

La linguistique hongrois (1923-6). Pp. 15. By ISTVÁN SÁGI. Reprint of *Revue des Études Hongroises et Finno-Ougriennes* 5. 376-392 (1927).

Le Maître Phonétique; organe de L'Association Phonétique Internationale. No. 22 (1928).

Man; a Monthly Record of Anthropological Science 28. 57-108 (1928).

Mélanges de L'Université Saint-Joseph 11. 1-304 (1926). Beyrouth: Imprimerie Catholique.

Modern Language Forum 13. 1-35 (1928).

Modern Philology 25. 385-512 (1928).

Le Muséon; revue d'études orientales 41. 1-168 (1928).

Namn och Bygd; Tidskrift for Nordisk Ortsnamnforskning 15. 65-184; 16. 97-192 (1927-8).

Patristic Studies 16 and 17: **Vita Sancti Ambrosii a Paulino eius Notario**; a revised text, and commentary, with an introduction and translation. Doctoral dissertation. Pp. xvi + 186. By SISTER MARY SIMOLICIA KANIECKA.—**Encomium of Saint Gregory on his Brother Saint Basil**; a commentary, with a revised text, introduction, and translation. Doctoral dissertation. Pp. xcvi + 166. By SISTER JAMES ALOYSIUS STEIN. Washington: The Catholic University of America, 1928.

Philological Quarterly 7. 97-208 (1928).

Revue des Langues Romanes 65. 1-106 (1927).

Ricerche Religiose 4. 97-288 (1928).

Slavia 6. 611-884 (1928).

Smithsonian Miscellaneous Collections 80. 6: **Yakṣas**. Pp. 43, with 23 plates. By ANANDA K. COOMARASWAMY. Washington: Smithsonian Institute, 1928.

Über Tonvokal + ht im Frühmittelenglischen. Pp. 200. By CARL MAHLING. Doctoral Dissertation. Leipzig: Mayer und Müller, 1928.

Zeitschrift für Indologie und Iranistik 6. 1-170 (1928).

THE SOURCES OF HITTITE *z*

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Of the four sibilants which the cuneiform symbols are capable of expressing, Hittite evidently had no use for two; *s* and *ṣ* occur so rarely in Hittite words that we are justified in explaining away such instances as are found (e.g. one should read *zé* rather than *ṣe*). The commonest Hittite sibilant is ordinarily written by the symbols which most Assyriologists transcribe *áš*, *šá*, *iš*, *ši*, *uš*, *šú*, etc. It corresponds etymologically to Indo-European *s* (*šagg-* 'see' = Gothic *saihwān*, *šipand-* 'pour a libation' = Greek *σπένδω*, *šittar* 'star' = Sanskrit *star-*, *ešun* 'I was' = Skt. *āsam*, *ešhar* 'blood' = Skt *asṛk*, *kwiš* 'who' = Latin *quis*, etc.). The simplest interpretation of the facts would lead us to pronounce these words with *s*, and there is nothing in the history of the cuneiform writing to conflict with such an interpretation.

Hittite also makes common use of the cuneiform symbols which are commonly transcribed *az*, *za*, *iz*, *zi*, *uz*, *zu*, etc. The etymological value of this *z* is somewhat complicated, and calls for more detailed treatment.

In a number of words Hittite *z* clearly stands for *t* + *s*. Thus the iterative-intensive suffix *šk*, when added to verb-stems ending in *t* (often written *d*) yields such forms as *šipanzakit*: *šipand-*, *azzikkinun*: *ed-ad-* 'eat',¹ *hurzakizzi*: *hurt-* 'curse', *zikkizzi*: *te-* 'place'.² Scholars have recognized that in these and similar forms the vowel written between *z* and *k* was not pronounced; *španzkit*, *hurzkizzi*, and *zkizzi* could not be written with cuneiform symbols without an extra vowel, and the scribes often wrote a redundant vowel that might have been avoided, as in *az-zi-ik-ki-nu-un* for **az-ki-nu-un*.

Similarly the intensive suffix *ša* combines with a dental mute to form *z* in *ezza-* 'eat' beside *ed-*.³

¹ See Sommer and Ehelolf, *Boghazköi-Studien* 10. 70.

² See Friedrich, *Staatsverträge des Hatti-Reiches in hethitischer Sprache* 81 f.

³ See Götze, *Madduwattaš* 105.

The nominative ending *š* gives us from dental stems: *aniyaz* 'performance': acc. *aniyattan*,⁴ *kartimmiyaz* 'anger': acc. *kartimmiyattan*,⁴ UD-*az* 'day': UD-*at*,⁵ *šawitišza* 'of the same year': gen. *šawitiššaš*,⁶ *kašza* 'hunger': acc. *kaštan*.⁷ In the last named words the final *-iš-za*, *-áš-za* is merely a graphic device for writing final *-sts*; the alternative was to write *-iš-az*, *-áš-az*, which would have been equally misleading. For the same reason the *nt*-stems show a non-phonetic *a* in the nominative, e.g. *humanza* 'all, entire' beside acc. *humandan*.⁸

The ablative ending *z* also represents *ts*, as I showed in the *Journal of the American Oriental Society* 47. 181-4 (1927). I no longer have any doubt that this is the nil-grade of the IE ablative suffix *tos*, which appears in Lat. *radicitus* 'from the root', etc.

Sommer, *BoSt.* 7. 41, assumed a secondary development of *t* between *n* and *s* to account for the enclitic particle *zan* beside *šan*; it originated after words ending in *n*, as *nan-zan*, while *nu-zan* and the like represent an analogical spread.⁹ Two additional examples of the change were pointed out by Sommer and Ehelolf in *BoSt.* 10. 2. Since the oblique cases of the noun for 'woman' are written SAL-*naš*, SAL-*ni*, SAL-*nan*, the nominative SAL-*za* must represent a word ending in *nz* = *nts*. Similarly *anzaš* 'we', beside the enclitic *naš* 'us', must be read *antsas*. The identity of *naš* with its Sanskrit equivalent, *nas*, is evident, and we may infer that *anzaš* is a declined form of IE and Pre-Indo-European **ns* (whence Goth. *uns* 'us'). I have tried to show, in the *American Journal of Philology* 48. 251 f. (1927), that *n* before a consonant yielded Hittite *u(n)*; but the examples are few, and none are better than this bit of evidence for a change ***ns* > *ants*. For the present it is safer not to decide whether *anzaš* contains *an* from *n*, or *a* is a prefixed vowel (cf. Lat. *enos*, Gk. *ἐμὲ*). In either case Hittite *nts* from *ns* is certain.

I have posited (LANGUAGE 3. 119) a similar change of *ls* to *lts* to account for Hittite *halze* 'call' beside IE **bhels-* (Skt. *bhāṣate* 'speaks').

In the third personal endings of the *mi*-conjugation Hittite *zi* corresponds to IE *ti*, e.g. *wahnuzi* 'he turns': Gk. *δείκνυσι* (West Gk. *δείκνυτι*) 'he shows', Skt. *sunoti* 'he presses out'; *šipandanzi* 'they pour a libation'

⁴ See Friedrich, *Zeitschrift für Assyriologie* NF 3. 203 (1927).

⁵ See Sommer and Ehelolf, *BoSt.* 10. 41 f.

⁶ See Sommer and Ehelolf, *ib.* I owe the meaning of the word to Kellogg, *Hittite Numerals* 52 ff.; but he is mistaken in considering the word an *s*-stem.

⁷ See Friedrich, *Kleinasiatische Forschungen* 1. 99₁ (1927).

⁸ See Sommer and Ehelolf, *BoSt.* 10. 2.

⁹ See Ungnad, *ZA* NF 2. 1022 (1925).

= Gk. *σπένδουσι* (cf. West Gk. *φέρουσι* 'they carry').¹⁰ A similar change, with a similar partial parallel in Greek, appears in *zik* 'thou' beside gen. *tuel*, acc. *tuk*; but the vocalism is obscure. An equally certain case of *z* from *t* before *i* is presented by the verb *kištanziya-* (middle) 'be hungry', from the noun **kištanza* (instr. *ki-iš-ta-an-ti-it*) 'hunger'.¹¹

In several other words *z* probably has a similar origin. I would compare *tuzziš* 'army' with Oscan *touto*, Old Irish *tuath*, Goth. *þiuda*, Lettic *tauta* 'people, state'. The Hittite word cannot be completely identical with the others; IE **toutā* shows the suffix *tā*, while Hittite *tuzziš* contains, if I am right, the suffix *ti*, which is, of course, equivalent to *tā*.

We seem to have the same suffix in the three 'superlatives', *hantezziš* 'first', *appezziš* 'last', and *šarazziš* 'highest'.¹² Although the IE suffix *ti* is not confined to use with verbal stems, the nearest approach to our Hittite words, both in form and in meaning, is provided by such a formation as Skt. *sam-i-tis* 'coming together, meeting'. The peculiar affinity of the IE root *i* for verbal prefixes and for *t*-suffixes is well known; cf. Lat. *comes*, *comitium*, *initium*, *exitium*. Hittite *appezziš*, then, is from PIE **apo-i-tis* 'going away'. The semantic development may have proceeded from this to 'distance', and then 'that which is most distant, last'. Probably the adverb **hanta*, which lies behind *hantezziš* 'first' is Gk. *ἄντα* 'face to face', the accusative beside the locative *ἀντί* 'opposite'.¹³ In view of its penultimate vowel *šarazziš* 'highest', from *šara* 'up', is probably an analogical creation on the model of *appezziš* and *hantezziš*.

Another suffix with *z* is exhibited by *šarnikzel* 'indemnification' beside *šarni(n)k-* 'indemnify' and *tayazil* 'theft' beside *taya-* 'steal'.¹⁴ This *zel* is undoubtedly a complex of two suffixes, and I would compare the Latin suffix *tēla* in *sutela* 'a frame-up' beside *suo* 'sew' and *tutela* 'a watching over' beside *tueor* 'watch'. Whatever the prior element of the Latin conglomerate, Hittite *zel* is most naturally connected with the IE suffix *ti*, which we have just been discussing. The final consonant of *zel* comes from nouns like *waštul* 'injury' beside *wašta-* 'injure' and *išhiul* 'contract' beside *išhiya-* 'bind'.

¹⁰ So Hrozný, *Die Sprache der Hethiter* 154 f.

¹¹ See Götze, *Madd.* 78.

¹² See Hrozný, *SH* 94; Götze, *Hattuššiliš* 91.

¹³ See Sturtevant, *LANGUAGE* 4. 163; and Kurylowicz *ap. Pedersen, Litteris* 5. 159 (1928).

¹⁴ See Friedrich, *Staatsvert.* 158.

Several words contain a suffix *uz(z)i*. Clear instances are *išpantuzzi* 'libation' beside *šipand-*,¹⁵ *warpuzi* 'an implement for washing' beside *warp-* 'wash',¹⁶ *appuzzi-* 'clay' or 'tallow'¹⁷ beside *ep-*, *ap-* 'take, seize' (properly 'the seizer, sticker'). If Hrozný, *Code Hittite* 134 f., is right in translating *išhuzziyaš* 'girdles', the word is a derivative of *išhai* 'he binds'. Sommer and Ehelolf, *BoSt.* 10. 18 f., mention several other words which contain the suffix, but their etymology is not clear. Possibly this suffix contains the nil-grade of IE *uot*, which contributed some of the forms of the perfect active participle (e.g. Skt *vidvat*, Gk. *ειδότες*). The IE languages never show nil-grade of this *uot*, and I will not attempt to decide whether or not Hittite has here preserved something which has been lost in IE, since another explanation lies ready at hand. Possibly our *uzzi* comes from **utī*, which was a contamination of PIE ***uot* and ***usī* (Skt. *viduṣī*, Gk. *ιδύια*).¹⁸

The meaning of several of the words listed above is easily derived from the participial force; *warpuzi* is '(instrumentum) lavans', *appuzzi-* is '(humus, oleum)prehendens', *išhuzzi-* is '(zona) ligans'. Since the original meaning of PIE ***spend-* is unknown, one cannot be sure of the development of meaning in *išpantuzzi* 'libation'; if the meaning of Lat. *spondeo* 'promise' (cf. Gk. *σπονδαί* 'truce') happens to be original, PIE ***spondutī* may have meant 'that which binds a promise or bargain'.

Many Hittite words preserve the sound group *ti*, and so we may be sure that a change of *ti* to *zi* was not still operative in the Hittite of the 14th and 13th centuries. Our present knowledge is scarcely adequate to an exact delimitation of the law, but we can make a beginning.

(1) The change seems to have been restricted to original *t*; at any rate it does not occur in *kardiaš*, *kardi* 'cordis, cordi' (with original *d*), in *tiyanzi* 'they place' (with original *dh*), or in *ti*, the second personal ending of the *hi*-conjugation (original *th*). It is possible, however, that *tiyanzi* was influenced by *tehhi* 'I place', *dai* 'he places', etc., and that *ti* from *tha* may belong in the next paragraph.

(2) The change apparently took place only before original *i*; for it does not appear in the medio-passive ending *ti* from ***tai*. The endings of the second person plural are often written *tini*, *tin*, but they should always be read, as they are sometimes written, *teni*, *ten* (cf. Gk. *λυετε*, etc.).

¹⁵ See Sturtevant, *LANGUAGE* 4. 1.

¹⁶ See Ehelolf, *KF* 1. 144-160, especially 156.

¹⁷ See Friedrich, *ZA NF* 3. 191 and footnote 2.

¹⁸ I do not mean to imply the existence of the feminine gender in PIE. The suffix *ī* may originally have had a very different force.

(3) After *s*, *t* remained, as it did in Gk. Hence we have the suffix *ašti* which Hrozný (*SH* 23) discovered in *dalugašti* 'length' beside *dalugaeš* (nom. pl.) 'long', and correctly identified with the Slavic abstract-forming suffix *ostĭ*, *estĭ*. It occurs also in *balhašti* 'breadth',¹⁹ and in *pudašti*, which designates some dimension in *KUB* 13. 2. 2. 7, 8. I am not certain of the meaning of *haštiš* (on which see Götze, *Hatt.* 104), but it probably contains the suffix *ti*. We probably have original *sti* also in *huštiš*, acc. *huštin* (on which see Hrozný, *SH* 15). Consequently *ešzi* 'he is', *šešzi* 'he sleeps', etc. owe the ending *zi* to analogy.

This article would not be complete without mention of *zeari* 'is cooked',²⁰ which I formerly connected (*AJP* 48.250—1927) with Gk. *ζέω* 'boil'. Since Gk *ζερός* 'boiled', etc., and Skt. *yasati*, *yasyati* 'boils' show an *s* which should survive in Hittite, I am now inclined to see in *yugan* 'yoke' the regular representation of Gk. *ζ* = Skt. *y*, and to separate *zeari* from *ζέω*.

¹⁹ See Forrer, *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 76. 262, and cf. *Keilschrifturkunden aus Boghazköi* 8. 57. 8 f.

²⁰ See Sommer and Ehelolf, *BoSt.* 10. 20.

OLD FRENCH *engan*, ENGLISH *gun*

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The Classic Latin words for 'reed' were HARUNDO, *f.* and CALAMUS, *m.*; the first, apparently, has not come down in any Romance tongue,¹ the second is Ital. *calmo*, Fr. *chaume* 'thatch' and *chalumeau* 'rustic pipe'. The Roman people also used for 'reed' CANNA, which was a borrowing from the Greek, and this word has been a flowing source of derivatives in all the Romance languages. The present paper aims to show that the list of derivatives is even more extensive than has been supposed.

To the list, I believe, is to be added Ital. *ingannare*, hitherto labeled 'of unknown origin', with its Old French cognates *enganer*, *deganer*: from these we have deverbals *engan*, *degan* in OFr. and OProv. respectively, while *engan*, if I am right, was carried to England in the dialectal form *enjon*, and gave us, in its aphetic form *gon* (cf. *gin* from *engin*), the English *gun*. Thus *cannon*, from Ital. *cannone* (an augmentative of *canna*) and *gun* would be, at bottom, the same word.

It is well known that an initial Greek kappa may become *g-* in Latin and Italian. As Grandgent puts it (see his *From Latin to Italian*, 1927, §§ 79, 87): 'Greek (*k*), whose explosion must have been very faint, evidently sounded to the Roman ear between (*k*) and (*g*), and the Romans reproduced it by both these consonants in their loan-words.' Thus we have doublets from Greek CRYPTA, CRŪPTA: Ital. *grotta*, but OFr. *crote*, *creute*; CAMBA 'leg,' probably of Greek origin, is *gamba* in Ital., but *camba* in Catalan and OSp., while the French territory is about equally divided between provenients of CAMBA and GAMBA.² The new *Linguistic Atlas of Italy*, by Jaberg and Jud, shows a strip of territory in the provinces N. E. of Rome in which Lat. cŪNA 'cradle' is *guna*, *gunna*, although such a form with initial *g-* is unknown to the literary language and to the dictionaries. As to CANNA, derivatives with *g-* have been

¹ In the viiith century, in N.E. France, *arundo* was unknown to the Reichenau glossator: he explains it by *ros*, i.e. Gothic *raus*, whence Fr. *roseau* 'reed'.

² Cf. Gilliéron, *Mots désignant l'Abeille* 10, (1918).

found in Spanish, as *gañon* 'wind-pipe,' and *esgañar*, an exact parallel to Fr. *égorger*, as first identified by Pietsch (*Mod. Phil.* 13. 635). Closer to the matter in hand is the fact that in some of the folk-dialects of central and southern Italy the group -NC- has the tendency to pass to -NG-, as noted by Zingarelli:³ for example, IN-CAN-ARE (from CANIS 'dog') giving 'nganarse 'be surly'; IN-CAELO 'n giele, IN-CANNA 'n ganna, meaning 'in gola'. If, as I shall show in a moment, CANNA meant also 'reed-flute', then a verb GANNARE 'play the flute' would be a legitimate formation, for we have in Ital. *fischiare* (from FISTULA), *cornare*, *zufolare*, *cornamusare*, as in Fr. *fresteler*, *chalemeler*, and *flûter*. As to the prefix, we have already in Latin INSIBILARE, INSONARE, INSTREPARE and the like. Du Cange would therefore be right in designating INGANNARE as a 'vox italica'. So much for the formation of INGANNARE. Still more important for the argument is the history of the meaning: how could CANNA, *GANNA 'a reed', or 'a flute made of a reed', give rise to Ital. *ingannare* 'cheat', 'deceive', and to Med. Lat. GANNARE, DEGANARE 'deride' 'mock'?

We may start with the *harundo aucupatoria* and the *calamus aucupatorius* of Pliny, and with the fact that flutes, or whistles, were certainly made of the tube-like stalks of the *canna*. Thus, Silius Italicus (7. 438-9) speaks of the herdsman recalling his herd of oxen with his piercing flute—*argūtā cannā*. A Sicilian shepherd-boy uses the same means (*Anthol. Lat.* i. 393. 6). In France, a few centuries later, Joinville (§ 581) says: 'Il fist penre canes de quoy l'en fait ces fleutes.' About the same period, the Italian Brunetto Latini employed the word *cannone* for a flute-like musical instrument (HDT, s.v. *canon*). Later, in the *Orlando Furioso* (17. 54) the shepherd—

dando spirto alle sonore canne

Chiamò il suo gregge fuor delle capanne.

So in mod. Ital., *canna* is sometimes synonymous with *zampogna* 'bag-pipe', or with *zufolo* 'flageolet', or is a synonym of *fischio*, Lat. FISTULA.

We know also that in Italy and France whistles and flutes have been extensively used to lure birds into the nets, traps, snares, and limed twigs of the professional bird-catchers. By imitating the cries of an enemy bird, or those of the bird itself, or by making some unusual noise which provokes the curiosity of the feathered victims, the AUCEPS, the *oiseleur* enticed his prey, luring them to capture and destruction. This

³ 'Il Dialecto di Cerignola', in *Archiv. glott.* 15. 227; cf. also Merlo, *Memorie dell' Instit. lombardo* 23. 298. I am indebted to Prof. J. Jud for these two references. See also Vaughan, *Dialects of Central Italy* 51, 66, 83-4 (1915).

'aviceptology' was widely practiced in the olden time, and one may adduce at least three parallels for the easy passage of the idea of 'bird-luring' to that of 'cheating', 'deception' in general: from the *chasse à la pipée* we have the mid. Fr. *piper*, the hunter using a *pipe* or *pipeau*. *Piper* 'cheat' is a verb beloved by François Villon and his associates; it is frequent in the sixteenth century, and is still in the Dictionaries. A second parallel is Provençal *brezaire*—*brezador* 'bird-catcher' (obviously Lat. PRAEDATOR)⁴ whence the mod. Prov. noun *bresagno* 'deceit.' In very recent times, from Esnault's *Le Poilu*, we learn that *fifrer* 'play the fife', in the argot of the trenches, means 'to deceive'. Conversely, the verb *frouer* 'imitate the cry of the owl to entice other birds' pretty certainly derives from Lat. FRAUDARE.

From this simple situation, an AUCEPS blowing on a whistle or flute to entice birds into his traps, several divergent meanings evidently arose: 1) to imitate, to lure by imitating, to lure; 2) to mock, to deride; 3) to show superior cunning, to be ingenious, to contrive. May therefore be classified under these three heads the following:

I. Meyer-Lübke enters, s.v. INGANNARE (which he does not connect with CANNA) Rumanian *ingînd* 'imitate', Macedonian *angînare* 'to entice dogs or sheep', Fr. dial. (Bourbonnais) *ingener* 'imitate', Norman (Le Bessin) *deganer* 'imitate,' with a different prefix. Cf. also Prov. *res d'aquo no m'engana* 'does not attract me', *Brev. d'Amor*, c. 1290; mod. Prov. *la goulo l'a 'nganà* 'la gueule l'a tenté', Mistral, s.v.

II. A primitive way of annoying a person is to travesty or merely repeat his words or actions: this is no doubt a very old kind of ridicule or mockery. Here we find rich material in medieval Latin: two MSS of the *Liber Historiae Francorum* (viiiith century, northern France) have GANNUM as a variant of CACHINNUS 'jeering' (ed. Krusch 312); the Reichenau Glosses (also viiiith century, N. E. France) have four entries (Foerster 129, 523, 659, 969) three to explain INLUDĒRE (in one of these, 523, the glossator's Vulgate had used DELUDERE) and one (969) to explain INSULTARE. Goetz-Gunderman furnish examples, some of them quite old, of GANNARE, DEGANNARE, also of GANNATOR and of GANNATURA, INGANNATURA, all with the idea of 'ridicule', 'mockery.'

III. In the third derived meaning, 'cheat' 'show superior cunning,' we have in OFr. and OProv. a common verb *enjaner* in the central region, *enganer*, *enganar* in the extreme North and South respectively. The *Linguistic Atlas of France* shows that this verb is still living in at least

⁴ Cf. Martial, *Epig.* 14. 217, ed. Lindsay: Praedo fuit volucrum: famulus nunc aucupis idem Decipit. . . . See Anglade, *Romania* 49. 109.

two villages, Carbonne, south-west of Toulouse, and Menton (Alpes-maritimes, localities nos. 771, 899) as a synonym of *tromper*. In literary texts of the xiith and xiiith centuries from the territory extending from Poitou thru Normandy northeast to Artois and Hainaut, this verb is frequent. Along with it is the deverbial *enjan*, *engan* 'deceit', 'cunning'.⁵

As to East Flanders, Gachet (*Glossaire roman*, 1859) mentions that the Hainaut form of *enganer* is *engonner*, and that at Mons (capital town of Hainaut) 'they still say *un engon*'. This word, unfortunately, he neglects to define, but like *engin* from *INGĒNIUM*, it probably means 'cunning contrivance,' or, particularly, 'tube-like machine'. Here, we may be certain, is the origin of the Eng. *gun*: for, if OFr. *engin* *INGĒNIUM* has given us *gin* (as in cotton-*gin*) *engon* would produce *gon*, *gonne*, later *gun*. Note that Hainaut is especially rich in coal-mines, that its soldiers were ever famous in the 'wars in Flanders,' and that precisely this is one of the regions where iron cannon, before and after gunpowder, are first heard of in France. Add to this that Hainaulters came very often to England: there is indeed a story that Edward III, in 1337, employed some of these men, *with cannon*, against the Scots. The statement as to cannon needs confirmation, but from Thomas Dickson's *Accounts of the Lord High Treasurer of Scotland*⁶ we learn that in that country the master-gunners, as early as 1430, were Flemings, Frenchmen, and Germans; that from 1489 onward there is mention of an especially large gun named at first 'Mons' and later 'Mons Meg' which after many vicissitudes is still on exhibition at the Castle of Edinburgh. W. T. Grenfell in 1919 noted the presence of still another 'Mons Meg' at Londonderry, in Ireland.⁷

To make the equation *(en)gan—gun* even more reasonable, we may recall that the vowel of mod. Eng. *gun* is, in England (not in America), a sort of (a) sound; foreigners have often been known to hear it as an (a); see Jespersen's *Modern English Grammar* (11:62 ff.). We may compare the exactly parallel history of Greek *κόμμι*, French *gomme*, Eng. *gum*; also Greek *κόλπος*, Span. Ital. *golfo*, Fr. *golfe*, Eng. *gulf*. Cp. also *gunny-sack* from Hindu *gōṇī*.

In England, the oldest dated mention of guns (using that word)

⁵ The development of 'deride' to 'cheat' is paralleled in mod. Greek *γελαω* which still may mean 'laugh', but also is the regular colloquial expression for 'cheat'. (Note of C. D. Buck.)

⁶ Edinburgh, 1877, 1. 216-23. I owe this reference to Professor Craigie.

⁷ A Labrador Doctor 111, Boston, 1919.

is 1339: 'instrumenta . . . vocitata *gonnes*' (*Oxford English Dictionary*) and the spelling with (o) is plainly the older. Chaucer's two passages, *Hous of Fame* 1643, and *Legend of Good Women* 637, both have *gonne*, so in *Piers Plowman*, and as late as Roger Ascham (d. 1568) who would have his courtlie Ientleman learn to 'shote faire in bow, or surelie in *gon*'.

As for the change from normal North French *engan* to the dialectal *engon*, this is a trait widespread in the Walloon territory. Examples are numerous in the region of Hainaut: thus at Arras we find *firton*, which is an English word, AS *ferðing* (thru **fertenc*, **fertan*); J. Haust mentions Brabançon *grimon* 'sorcerer' from Fr. *nécromant*, *négromant*, and from Walloon territory *ongueçon* for *angleçon*, *ch'tôn* which is Flemish *staen*, *côme* which is German *kamm*, etc.⁸

But Gachet's *engon* of 1859 may be of recent appearance: can the word in that form be instanced about the period when guns first came into use in warfare? One instance of the needed aphetic form *gon* occurs about 1275, in the works of the poet Baudouin de Condé, this town being at no great distance from Mons, in Hainaut. This passage must be given in full (1.161, ed. Scheler):

Li vilains vint crollant le cief
S'oeuvre le porte et, quant me voit,
Paia moi cou k'il me devoit;
Car, ensi con uns *gons*, au prosne
Hauce et me giete une ramprosne,
Et me demande qui j'estoie . . .

This passage I take to mean: "The villain [an especially surly gate-keeper] came shaking his head, and opens the gate, and when he saw me paid me what he owed me [cf. Eng. fam. 'He gave me mine']. For just like a gun, at the grill, he raises [or, draws back] and casts at me an insult, and asks me who I was . . ."⁹

⁸ See Herzog, *Neuf Französische Dialekttexte*, 1906, §124; Haust, *Etymologies wallonnes et françaises*, 1923, *passim*, particularly pp. 184, 214: 'La confusion des nasales *on* et *an* est fréquente dans nos parlers'.

⁹ Instead of *hausser*, either 'to raise arm or weapon in the act of striking', or 'to raise the voice', two of the three MSS have *hauwer*, *haver* = 'an sich ziehen' according to Meyer-Lübke. I punctuate differently from Scheler, who was puzzled by the passage. It is known that *prosne* (for the etymon, see now J. Haust, in the Antoine Thomas volume, 1927) means the iron grill from behind which the porter would speak to strangers before admitting them. Littré *Etudes et Glanures*, 1880, p. 256, for *gons* would read *hons* (Lat. *homo*); J. Haust,

Braune's derivation of this whole group of words from a hypothetical German verb **gannon* will be found set forth in the *Zeitschrift für roman. Philologie* (40. 329-34): but, as stated above, Du Cange was probably right in seeking the origin of *INGANNARE* in Italy. Muratori would derive it from the Arabic, while Skeat and J. H. Stevenson would see in *gun* a derivation from the woman's name *Gunhild*, which is found applied in 1330-1 to a mangonel: 'una magna balista de cornu quae vocatur Domina Gunilda.' Old Norse *Gunhildr* is a name of which both elements mean 'war', and it is quite possible, as Weekly suggests,¹⁰ that such a nickname 'Gun' may have fallen in with the Belgian-French word; or, *vice versa*, that Belgian *gon* might have suggested the name for this early Big Bertha. But to derive the word exclusively from that source would be, to quote an expression of Professor Tout's, about as bad a shot as the whole history of artillery can show.¹¹ The reason is, that names of new machines, as a rule, are taken from their makers, from those who make them best, in largest quantity, with greatest variety of form and of adaptation to special uses; this consideration, in the early fourteenth century, would point strongly towards East Flanders, the iron and coal country, and towards the Flemish mercenaries who are mentioned so frequently as being in charge of artillery in the wars of the period.¹²

Mélanges Antoine Thomas, 206 note (1927) would correct to *gous*, Walloon *gò*, 'chien mâle', but neither of these scholars suspected the existence of an aphetic form of the Hainaut *engon*. Besides, *gons* is ostensibly the reading of all three MSS.

¹⁰ *An Etymological Dictionary of Modern English*, New York, 1921.

¹¹ Disregarding the danger of introducing an element of levity into this serious discussion, the suggestion need not be withheld that the familiar expression 'son of a gun', of which several random explanations have been offered, may be French or Provençal *filz d'engan*, on the model of 'son of Belial', 'filius proditiōis', and similar depreciatory formulae. It has never been so 'bloody' an insult as *filz à putain* and others. But thus far I have been unable to quote an instance of *filz d'engan*: the nearest I have come to it is *buzartz d'engan* in Provençal.

¹² I printed a brief note, 'A new Etymon for English *gun*', in *Modern Philology* 13. 239 (1915), but its feeble reverberations were evidently drowned in the drum-fire of the Great War.

EARLIEST MORPHOLOGICAL CHANGES IN MIDDLE ENGLISH

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The history of English since 1050 may be regarded as consisting of two periods with the year 1300 as a very rough *terminus ad quem* for the first and *terminus a quo* for the second. The period from 1300 to the present has been characterised by very extensive changes in the phonetic form of English and by important syntactic changes but not by correspondingly great changes in the morphological pattern of English speech. The morphological changes in nouns and adjectives have been almost wholly the result of the loss of final *e* and to a very small extent the result of analogical processes. Analogical processes have resulted in important changes in the inflectional pattern of verbs but in verbs also changes in morphological structure have been to a much greater extent the result of other causes, especially the displacement of forms ending in *-en* by forms ending in *e* and the subsequent loss of final *e*.

The period from 1050 to 1300, on the other hand, was characterised by very extensive morphological changes that transformed English from a rather highly inflected language to one having the relatively few and simple inflections of late Middle English. All distinctions of case were lost except the genitive singular of nouns and the distinctions of grammatical gender were lost altogether. And even the grammatical categories that remained were more simply expressed, for in late Middle English the single ending *-es* had replaced the variety of endings that had expressed the genitive singular and plural of nouns in Old English.

The rapid and extensive morphological development that took place between 1050 and 1300 was the result of a highly complex cooperation of sound changes, syntactic changes, and analogical changes. To identify these several factors in the successive stages and various phases of the morphological development is an extremely important problem. It seems obvious, however, that the cooperation of these factors must have become increasingly intricate as the development pro-

ceeded and as the results of sound changes, syntactic changes, and analogical changes themselves continually provided more varied material for analogical processes to work upon. It is therefore the purpose of the present paper to examine only the very earliest morphological changes that took place within this period, to establish the relative chronology of these changes, to identify the parts played by sound change and analogy in bringing about the development, and to show *what* analogical processes operated and why they should have operated at this period rather than earlier.

The documents that we must depend on for a knowledge of the earliest stages of the morphological development of Middle English are not the literary texts of the thirteenth century (such as Layamon's *Brut*, the *Moral Ode*, the *Owl and the Nightinga'e*, and the *Ancren Riwele*) or the twelfth century transcriptions of eleventh century texts (contained in such MSS as Cotton Vespasian D 14, Bodley 343, and Hatton 38) but eleventh century MSS containing texts composed for the most part early in the eleventh century or in the tenth. The MSS of the eleventh century were written under the influence of a very strong literary and orthographic tradition. None of them probably reflect accurately the speech habits of the scribes who wrote them. The written form of all of them is more or less archaic. The very great majority of the inflectional forms, even in the MSS written in the latter part of the century, are the normal Late West-Saxon forms of (say) the year 1000. But alongside of the forms of the year 1000 we find occurring, to a small extent in the early eleventh century MSS and to an increasing extent in MSS of the later eleventh century, forms that were not Old English but Middle English. These forms are only occasional, not normal, even in the texts in which they are most numerous. They are 'slips', errors, in the sense of being departures from the orthographic tradition to which the scribes were intending to conform. But they are errors in that sense only, for they reveal the speech habits of the scribes which the 'correct' forms conceal. These occasional 'incorrect' forms are our best (and almost our only) evidence of the actual speech of the period from about 1050 to 1100.

In practically all the texts (109 out of 110) used as the basis of the present paper there occur examples of inflectional changes that are very much more frequent or normal in the twelfth century MSS. These changes are as follows:

1. The unaccented post-tonic vowels *a*, *e*, *o*, and *u* are levelled to a vowel written *e*;

2. Final *m* in unaccented syllables becomes final *n*;
3. Final *n* in unaccented syllables is subject to loss;¹
4. Feminine *jō*-stems and long feminine *ō*-stems, which ended in a consonant in Old English, end in *e*.

In addition to these changes there occur in 30 of the texts a few examples of inflectional forms which, tho much more frequent in the twelfth century MSS, did not attain their maximum displacement of historical forms until the second half of the thirteenth century or even later.² These forms, in spite of their sporadic occurrence in eleventh century MSS, belong really to a later period in the morphological development of Middle English than that to which the present paper is devoted.

Of the four changes noted above, the first change, levelling of unaccented vowels, affected by far the greatest number of inflectional forms and resulted in the greatest modification of inflectional patterns. Yet it is this change that is least consistently evidenced by the written forms of the eleventh century MSS. In only thirty of the texts used is the evidence of levelling at all conclusive and even in those texts the historical vowels *a*, *o*, and *u* are far more frequently retained than written *e*. The nature of the evidence is such that the relative chronology of this change can best be considered after the relative chronology of the other three changes has been established.

The relative chronology of the change of *m* to *n* and the loss of final *n* is indicated, I believe, by the distribution of the forms in the texts studied. The details of the evidence (the examples and the texts used)³

¹ For the history of this change in the eleventh and twelfth centuries and for much of the evidence used in this paper see my former paper, *Loss of Final n in Inflectional Syllables of Middle English*, published in *LANGUAGE* 3. 232-59 (hereafter referred to as LFn).

² These forms are:

þe and *þeo* for the demonstrative and definite article *sē* and *sēo* (Nos. 6, 19, 37, 38, 66, 67, 68, 77, 78, 82, 89, 103, 106)

Analogical *n*-plurals (Nos. 5, 24, 45, 65, 76, 80)

Use of the dative forms of the third personal pronoun instead of the accusative forms (Nos. 65, 68, 80, 83)

Analogical *s*-plurals (Nos. 24, 38, 65)

The numbers in parenthesis refer to the texts as listed in the Appendix. It should be understood that my statement as to the period at which these forms attained their maximum displacement of historical forms applies to the Southern dialect, not to the Midland.

³ The material I have used does not exhaust the eleventh century material that is in print but includes the great majority of prose texts available in fairly modern editions. Considerably more material is available in Liebermann's

are presented in the Appendix to this paper. The data may be very concisely summarised as follows:

106 texts out of 110 show evidence of the change of final *m* to *n*;

46 texts show evidence of the change of final *m* to *n* but contain no examples of loss of final *n*;⁴

60 texts show evidence of the change of final *m* to *n* and also contain examples of loss of final *n*;

3 texts contain examples of the loss of final *n* but show no evidence of change of final *m* to *n*.⁵

This distribution seems to me explainable only on one hypothesis: that the change of final *m* to *n* in unaccented syllables was earlier than the loss of final *n*. If the loss of *n* had preceded the change of *m* to *n* we should expect that very few texts or none would show evidence of the change of *m* to *n* without also showing evidence of the loss of *n* and that a large number of texts would show evidence of the loss of *n* but would show no evidence of the change of *m* to *n*. In other words, the distribution would be the reverse of what we actually have. If the change of *m* to *n* had been contemporaneous with the loss of *n* we should expect that the majority of the texts would show evidence of both the change and the loss and that the number of texts showing evidence of the loss of *n* but no evidence of the change of *m* to *n* would be approximately equal to the number of texts showing evidence of the change of *m* to *n* but no evidence of the loss of *n*. The relative number of examples occurring in the texts that showed evidence of both the change and the loss also indicates the priority of the change of *m* to *n*. For altho unaccented syllables ending in *n* are very much more numerous in Old English than those ending in *m*, the number of examples of the

Gesetze der Angelsachsen, for I restricted myself there (somewhat unwisely, I think) to the texts composed fairly late in the Old English period. I have used only a few of the interlinear texts and have made no use of the poetical texts. Included among the eleventh century texts are a few written early in the twelfth century.

⁴ Of these 46 texts, 7 contain examples of final *e* in the nominative singular of feminine *jō-* or long feminine *ō-*stems and really belong, I believe, to a later period of morphological development than the other 39 texts.

⁵ These three texts are numbers 13, 34, and 77. The possibility of their showing evidence of the change of *m* to *n* is greatly restricted by their brevity, for all are less than 1000 words in length. Moreover, two other texts in the same MS (tho not in the same hand) as 13 contain examples of the change of *m* to *n* and number 76 in the same MS as 77 contains examples of the change; number 34 is the only text I have from the MS in which it occurs.

change of *m* to *n* is much greater in the 60 texts than the number of examples of loss of *n*.⁶

If the change of final *m* to *n* preceded the loss of *n* in unaccented syllables the secondary final *n*'s resulting from this change must have been as subject to loss as the primary final *n*'s. That they were equally subject to loss is shown by the fact that in the twelfth century MSS the loss of final nasals is as great in the strong adjective as in the weak adjective and as great in the dative plural of strong nouns as in the plural of weak nouns.⁷ It is indicated also by the fact that the eleventh century MSS already show some loss of the nasal in the dative singular and dative plural of the strong adjective and in the dative plural of strong nouns (all of which were *-um* forms in Old English).⁸ In the eleventh century MSS, however, the loss of the final nasal is much less frequent relatively in the dative singular and dative plural of the strong adjective than in the weak adjective. This fact might be interpreted as evidence that the change of *m* to *n*, tho beginning earlier, may have partly overlapped the loss of *n*. As I have already argued in a former paper, it makes very little practical difference whether the change of final *m* to *n* was completely carried out before the loss of final *n* began or whether the change partly overlapped the loss; the important fact is that the secondary *n* resulting from the change was subject to loss.⁹

The hypothesis of partial overlapping would be difficult, perhaps impossible, to actually disprove, but I believe the totality of evidence is against it. I would call attention in particular to the following facts. (1) Altho the number of forms showing the change of *m* to *n* is much smaller in the great majority of our texts than we should expect to find on the hypothesis that change of *m* to *n* was completed before the loss of *n* began, there are at least two texts, containing no evidence of loss of *n*, in which the number of *-um* forms spelled with final *m* is less than twice that of the number of *-um* forms spelled with final *n*.¹⁰ (2) In a number of eleventh century texts, including two that contain few or no *-um* forms spelled with final *n*, we find forms that ended in *n* in Old

⁶ A mere inspection of the material in the Appendix is sufficient to verify this statement.

⁷ See Table I in LFn 238.

⁸ See Table II in LFn 243.

⁹ See LFn 246f.

¹⁰ These texts are numbers 4 and 92.

English spelled with final *m*.¹¹ (3) Altho the change of *m* to *n* was certainly completed by the year 1100 at the latest, the Old English *-um* forms are at least occasionally spelled with final *m* in all but two of fifteen twelfth century texts that I have studied and are spelled with final *m* more often than with final *n* in seven of the fifteen texts.¹² I infer from these facts that the apparent stability of final *m* in the eleventh century MSS as in the twelfth century MSS is a graphic rather than a linguistic phenomenon and that the change of *m* to *n* not only began but was completed before the loss of *n* began.

The relative chronology of the loss of final *n* and the addition of final *e* in the nominative singular of the feminine *jō*-stems and the long feminine *ō*-stems is also indicated, I believe, by the distribution of the forms in the texts. The distribution (as shown in detail in my Appendix) is as follows:

40 texts out of 110 show no evidence either of the loss of *n* or of the addition of *e* in the feminine nominative singular;

63 texts show evidence of the loss of final *n*;

30 texts show evidence of the loss of *n* but no evidence of the addition of *e* in the feminine nominative singular;

33 texts show evidence of loss of final *n* and also of the addition of *e* in the nominative singular of feminines;

7 texts (7, 27, 47, 52, 54, 58, 91) show evidence of the addition of *e* in the feminine nominative singular but contain no examples of the loss of final *n*.

If the addition of *e* in the feminine nominative singular had preceded the loss of *n* we should expect that very few texts or none would show evidence of the loss of *n* without also showing evidence of the addition of *e* in the feminine nominative singular but that a large number of

¹¹ In two homilies of Aelfric printed from MS Corpus Christi College Cambridge 188 by Assmann (*Bibliothek der angelsächsischen prosa* 3. 24-64) I found only one example of the change of *m* to *n* but five examples of *-um* for *-an*; Aelfric's *Letter to Wulfsgie* printed from MS Corpus Christi College Cambridge 190 by Fehr (*Bibliothek der angelsächsischen prosa* 9. 1ff.) contains no clear case of the change of *m* to *n* but at least two examples of *-um* for *-an*. The other texts containing examples of final *m* used instead of final *n* are numbers 9, 10, 12, 17, 31, 37, 46, 67, 68, 71, 81, 82, 84, 89, 95. Most of the examples are *um*-spellings for the masculine and neuter dative singular of the weak adjective but there are also examples of infinitives and oblique forms of weak nouns spelled with final *m*.

¹² Of the twelfth century texts used for Table I in LFn (listed in LFn 235f.), *um*-spellings predominate, with some *n*-forms, in numbers 3, 6, 7, 8, 9, 12, 15; *n*-forms predominate, with some *um*-spellings, in numbers 1, 2, 4, 10, 11, 13; there are very few or no *m*-spellings in numbers 5 and 14.

texts would show evidence of the addition of *e* in the feminine nominative singular but no evidence of the loss of *n*. That is, the distribution would be the reverse of what we actually find.¹³ The evidence therefore seems clearly to indicate that the loss of final *n* preceded the addition of *e* in the feminine nominative singular.

The chronological relation of loss of final *n* and addition of *e* in feminines was not the same, however, as the chronological relation of change of *m* to *n* and loss of *n*. Change of *m* to *n* was completed before loss of *n* began but loss of *n* was not completed before the addition of *e* in the nominative singular of feminines began. For loss of final *n* began (at least according to the conclusions reached in my former paper)¹⁴ as a combinative sound-change whose primary result was that each word affected by the change had two forms, with and without *n*. The original distribution of the forms with and without *n* depended on the phonetic environment of the word. This original distribution was later modified, however, by the operation of analogical processes that eventually resulted in establishing an entirely different distribution that depended on grammatical categories and was independent of phonetic environment. Loss of final *n* preceded the addition of *e* in the nominative singular of feminines only in the sense that it began first. In another sense, however, the two changes were contemporary, for the period during which the forms with and without *n* were being redistributed thru the operation of analogical processes included the period during which *e* was being added in the nominative singular of feminine nouns that ended in a consonant in Old English.

The levelling of unaccented posttonic *a*, *e*, *o*, and *u* to a vowel written

¹³ The evidence of the texts that have examples of the loss of *n* but not of the addition of *e* in the feminine nominative singular is of less weight than their number might seem to indicate. Numbers 7, 27, and 58 (containing about 1000, 600, and 400 words respectively) are so short that the possibility of their showing evidence of the loss of *n* is considerably restricted. (Moreover, numbers 29 and 30, in the same MS and hand as 27, and numbers 55, 56, and 57, in the same MS and hand as 58, show evidence of the loss of *n* tho 27 and 58 do not.) With respect to the longer texts, number 48 in the same MS as 47, number 51 in the same MS and hand as 52, and number 53 in the same MS and hand as 54 show evidence of the loss of *n* tho 47, 52, and 54 do not. The distribution of forms in number 91 (which is partly prose and partly verse) is not paralleled in any other of the 110 texts. The verse contains 5 examples of the addition of *e* in the nominative singular of feminines but no example of either change of *m* to *n* or loss of *n*. The prose parts of the text (and also texts 89 and 90 in the same MS) contain examples of the change of *m* to *n* but no examples of the loss of *n*.

¹⁴ See LFn 248f.

e is, as I have stated above, less clearly reflected in the written forms of the eleventh century MSS than the other three changes we have examined. It is evident that the orthographic and literary tradition of the historical vowels was very strong, for retention of the historical vowels is characteristic even of many of the twelfth century MSS. In that part of MS Laud 636 containing the *Chronicle* up to 1121, in MSS Harleian 6258 and Corpus Christi College Cambridge 303, and in the greater part of MS Bodley 343 the historical vowels *a*, *o*, and *u* are much more often retained than written *e*. They are more frequently retained than written *e* even in MS Cotton Claudius D 3 written in the first quarter of the thirteenth century. The historical vowels are quite frequently retained but much more frequently written *e* in MSS Hatton 38, Cotton Vespasian D 14, and Cotton Vespasian A 22, in those parts of MS Laud 636 containing the 'Peterborough additions' and in the latter part of MS Bodley 343. In MS Lambeth 487 the historical vowels *a*, *o*, and *u* are written *e* about as frequently as they are retained.¹⁵

In view of this graphic stability of the historical unstressed vowels the spellings in eleventh century texts that are positively indicative of levelling are of more importance than the spellings that conform to tradition. It is difficult to believe that a scribe would even occasionally have written *e* for the back vowels *a*, *o*, or *u* unless Old English unaccented *a*, *e*, *o*, and *u* had been merged into one uniform vowel in his own speech. Yet we find the back vowels *a*, *o*, and *u* written *e* with more or less frequency in thirty of the texts we have examined. These texts are the following:

- 4 texts (14, 101, 104, and 108) that show evidence of the change of *m* to *n* but not of the loss of *n* or of the addition of *e* in the feminine nominative singular;
- 11 texts (22, 23, 39, 40, 43, 50, 51, 57, 78, 79, and 83) that show evidence of the loss of *n* but not of the addition of *e* in the feminine nominative singular;
- 15 texts (12, 13, 20, 24, 25, 31, 37, 38, 41, 46, 56, 65, 66, 68, and 80) that show evidence of the addition of *e* in the feminine nominative singular.^{16a}

¹⁵ The MSS referred to are those containing the texts listed in LFn 235f. The *Fragments* in the Worcester MS is the only text in the list that has *e* almost exclusively for OE *a*, *o*, and *u*. My statements as to the relative frequency of the spellings are only a very rough estimate based on a sample of one or two pages in each text.

^{16a} Number 24 is in MS Corpus Christi College Cambridge 303, the twelfth century text referred to in the preceding paragraph.

This evidence is very far from being conclusive as to the chronological position of levelling relative to the other three changes. But if we accept the hypothesis that the change of *m* to *n* preceded the loss of *n* and that the loss of *n* preceded the addition of *e* in the feminine nominative singular the evidence I have cited indicates that levelling of the unaccented vowels did not precede the change of *m* to *n*. The evidence also seems to me difficult to reconcile with the hypothesis that levelling was contemporary with the addition of *e* in the feminine nominative singular, for there are too many texts that show evidence of levelling without showing evidence of the addition of *e* in feminines. The hypothesis that best fits the evidence cited would seem to be that levelling of unaccented vowels preceded the addition of *e* in the nominative singular of feminines and was contemporary with the earlier stages of the loss of final *n*.

Some additional evidence as to the relative chronology of levelling may be derived from the spellings of forms that show the change of *m* to *n* and of forms that show loss of final *n*, as given in my Appendix.

The *-um* forms that show evidence of the change of *m* to *n* are spelled *un*, *on*, *an*, or *en*. The distribution of the different spellings in the three classes of texts is approximately as follows:

	<i>un</i>	<i>on</i>	<i>an</i>	<i>en</i>
Texts that show evidence of the change of <i>m</i> to <i>n</i> only.....	2	82	123	1
Texts that show evidence of loss of <i>n</i> but not of addition of <i>e</i> in feminines...		75	118	3
Texts that show evidence of the addition of <i>e</i> in feminines.....	$\frac{4}{6}$	$\frac{54}{211}$	$\frac{168}{409}$	$\frac{6}{10}$
Total.....	6	211	409	10

This evidence again seems to show that levelling of unaccented vowels did not precede the change of *m* to *n* but to throw little or no light on the relative chronology of levelling and the other two changes. But the fact that the proportion of *an* spellings is so much greater in the third group of texts than in the first and second seems additional evidence that the loss of *n* preceded the addition of *e* in the feminine nominative singular. For the *on*-forms and the *an*-forms reflect successive stages in the processes of weakening of unstressed *u* and the ratio of *on* spellings to *an* spellings in the three groups is respectively .66, .64, and .32.

The forms that show evidence of the loss of *n* are variously spelled *u*, *o*, *a*, or *e*. The distribution of these different spellings of the Old

English endings *um*, *on*, and *an* in the two classes of texts is approximately as follows:^{16b}

	u	o	a	e
Texts that show evidence of the loss of <i>n</i> but not of the addition of <i>e</i> in feminines.			30	17
Texts that show evidence of the addition of <i>e</i> in feminines.	1	1	60	54
Total.	1	1	90	71

The proportion of *e* spellings to *u*, *o*, and *a* spellings is decidedly greater in the texts that show evidence of the addition of *e* in feminines than in the texts that do not, the ratio being .87 and .57 respectively for the two groups. The substantially smaller proportion of *e* spellings in the texts that do not show evidence of the addition of *e* in feminines seems again to confirm the hypothesis that loss of *n* was earlier than the addition of *e* in the nominative singular of feminines. As to the relative chronology of levelling and the other two changes the evidence is still very far from being conclusive but seems harder to reconcile with the hypothesis that levelling was contemporary with the addition of *e* in feminines than with the hypothesis that it preceded that change.

It seems fairly clear that levelling of unaccented vowels was later than the change of *m* to *n*. And it seems rather probable that levelling was completed before the addition of *e* in the nominative singular of feminines. The evidence I have presented is not complete enough and not exact enough to make possible a more definite determination of the chronology.¹⁷ For convenience, however, I shall assume as fact the probability that the completion of levelling was contemporary with the earlier stages of the loss of final *n* and preceded the addition of *e* in feminines and I shall point out in a footnote the modification that must be made in my argument if later investigation fails to confirm my assumption.

^{16b} I have not counted among the *e* spellings those that occur in present and preterit subjunctive forms and the past participles of strong verbs, which ended in *en* in OE.

¹⁷ The evidence is incomplete because of the indefiniteness of the criterion that those texts show evidence of levelling in which the back vowels are written *e* 'with more or less frequency'. Some more objective criterion is needed, e.g. that two (or three) such spellings occur in 1000 words of text. I believe that the application of such a criterion to the texts I have used might show that there are rather more than 30 texts that show evidence of levelling. It would also make possible a crude quantitative treatment of the data that might very well show differences great enough to be significant.

The change of *m* to *n* and the levelling of unaccented posttonic *a*, *e*, *o*, and *u* were clearly sound-changes.¹⁸ In its earlier stages the loss of final *n* was a combinative sound-change; in its later stages analogical processes cooperated with sound-change in establishing the distribution of forms with and without *n* that we find at the end of the twelfth century. The addition of *e* in the nominative singular of the feminine *jō*-stems and the long feminine *ō*-stems cannot have been the result of a sound-change but must be assumed to have resulted from the operation of analogical processes. It therefore remains for us to inquire *what* analogical processes operated and why they should have operated at this period and not earlier.

The nominative and accusative plural forms were identical in all the Old English types of noun inflection. The nominative and accusative

¹⁸ According to Luick (*Historische grammatik der englischen sprache* 303, 491) and Jordan (*Handbuch der mittenglischen grammatik* 128, 152) the change of *m* to *n* in the dative ending *um* was not the result of sound-change but of analogy. Their argument is concerned solely with showing that the change was *not* sound-change, not with showing that it *was* an analogical development. Luick's treatment of the point is more discriminating than Jordan's. For Jordan cites as part of his evidence that *m* 'bleibt in allen stellungen lautgesetzlich erhalten, auch im auslaut' the words *bosom*, *bottom*, *fathom*, etc., which are obviously irrelevant to the discussion because the *m* was protected in the final position by its retention in the inflected forms. The only words offered as evidence in Luick's discussion are Middle English *hwilom* and the place-name *Downham* (Middle English *Dounum*). Now *hwilon* is much commoner in the eleventh century texts than *hwilum* (there are more than 25 examples of *hwilon* in my Appendix) and the earliest Middle English references for *hwilom* in Middle English in the *Oxford Dictionary* are *Orm*, and *Kentish Sermons*. There is therefore good reason for accepting Jespersen's view (*Modern English Grammar*, 1. 2. 414) that the final *m* of *hwilom* does not come from the Old English dative plural ending but developed (like *m* in *venom*, *ransom*, etc.) from earlier Middle English *n*. Jespersen's discussion is well supplemented by Holthausen's note (*Anglia Beiblatt*, 31. 137f.), which points out that final *m* in all the words under discussion can be explained as due either to 'assimilation at a distance' (e.g. *pilgrim*) or to dissimilation in syllables that began and ended with a dental. The difficulties in the way of regarding the change of *m* to *n* as a sound-change are therefore chiefly imaginary ones. Even if there were real difficulties in the way of so regarding it they would have to be very serious indeed to justify us in attributing the change to analogy. The analogical change according to Luick was from *um* to *un* (or *on*), which was later weakened to *an*; according to Jordan it was from *um* to *on*. What analogical process could have displaced the ending *um* by an ending *un* which does not occur in Old English at all? Or by the ending *on* which occurs only as a plural ending of verbs? We have a right to ask that those who hold this theory shall explain *what* analogical process could have operated to produce this result.

singular forms were also identical in all neuter nouns and in all masculine nouns except the *n*-stems (e.g. nominative singular *hunta*, accusative singular *huntan*). But the nominative and accusative singular of the short feminine *ō*-stems, the long feminine *ō*-stems, the feminine *jō*-stems, and the feminine *n*-stems were distinctive in form (e.g. nominative singular *lufu hwīl*, *synn*, *tunge*; accusative singular *lufe*, *hwīle synne*, *tungan*). These four types of inflection included such a preponderating majority of all the feminine nouns that distinctiveness of form in the nominative and accusative singular was very stable in Old English. In fact even the feminine *i*-stems, whose nominative singular and accusative singular were identical in early Old English, tended in late Old English to conform to the pattern of the *jō*-stems and the long *ō*-stems as a result of an analogical process that may be expressed by the proportion:

dæde (acc. sing.) : *dæd* (nom. sing.) :: *hwīle* : *hwīl*
synne : *synn*¹⁹

After loss of final *n* had occurred in unaccented syllables, however, the nominative and accusative singular of the masculine *n*-stems became identical (e.g. *hunta-hunta* instead of the older *hunta-huntan*). And after the levelling of unaccented vowels the nominative and accusative singular of the feminine *n*-stems and the short feminine *ō*-stems also became identical (e.g. *tunge-tunge*, *lufe-lufe* instead of the older *tunge-tungan*, *lufu-lufe*). Thus the formal distinction between nominative and accusative singular in the feminine nouns ending in a consonant (the *jō*-stems and the long *ō*-stems) was no longer supported by distinctiveness of form in any of the other types of noun inflection and the analogy of the other inflectional types operated. This analogy may be expressed by the following proportion:

hwīle, (nom. s.) : *hwīle*, (acc. s.) :: *lufe* (nom. s.) : *lufe* (acc. s.)
synne (nom. s.) : *synne* (acc. s.) :: *tunge* " " : *tunge* " "²⁰
hunte " " : *hunte* " "
ēage " " : *ēage* " "

¹⁹ In the proportions given here and later the analogical formation is indicated by italics.

²⁰ I wish to point out here a formal contradiction between this proportion and the first proportion in LFn 253. In LFn the nominative singular form *hwīle* is used as one of the elements in a proportion that is intended to show that the *n*-less form of the dative and accusative singular *hunte* (and by implication *tunge*) was supported by the analogy of five other types of noun inflection and that this analogy tended to accelerate the loss of *n*. In the proportion given here the *n*-less forms of *hunte* and *tunge* are themselves used as elements of a

<i>Synne</i> (nom. s.):	<i>synne</i> (acc. s.):	:	<i>ende</i>	nom. s	:	<i>ende</i>	aac. s.
			<i>rice</i>	" "	:	<i>rice</i>	" "
			<i>sune</i>	" "	:	<i>sune</i>	" "
			<i>dure</i>	" "	:	<i>dure</i>	" "
			<i>dæd</i>	" "	:	<i>dæd</i>	" "21
			<i>wulf</i>	" "	:	<i>wulf</i>	" "
			<i>lim</i>	" "	:	<i>lim</i>	" "
			<i>word</i>	" "	:	<i>word</i>	" "22

It is evident that these analogical processes could not have begun to operate until loss of final *n* occurred and that they could not have operated fully until levelling of unaccented vowels was completed.²³ It is also evident that the operation of these analogical processes was practically inevitable after the stability of the traditional inflectional patterns had become so radically modified by the sound-changes that had taken place in unaccented syllables.

proportion that is intended to account for *hwile* itself. Obviously the nominative singular form *hwile* was not available until it came into use. The *n*-less forms of *hunte* and *tunge* were available as part of the analogical material that favored the development of *hwile*, however, for loss of *n* preceded the analogical change. And after the nominative singular form *hwile* had developed it still further strengthened the analogical support that favored the *n*-less form of *hunte* and *tunge*.

²¹ The analogical accusative singular form *dæde* (see page 249 above) did not completely displace the earlier form *dæd*; both survived in late Old English. The older accusative form *dæd* was one of the elements in the inflectional system that favored the development of the analogical nominative forms *hwile* and *synne*. But on the basis of the later accusative singular *dæde* there developed by analogy a new nominative singular form *dæde*.

²² The words *lufe*, etc., represent the following types of noun inflection: short feminine *ō*-stems; feminine, masculine, and neuter *n*-stems; masculine and neuter *ja*-stems, masculine and feminine *u*-stems, feminine *i*-stems, masculine *a*-stems, short neuter *a*-stems, and long neuter *a*-stems. The very great majority of all the Old English nouns were declined according to one or other of the types of inflection included in the proportion and the nominative and accusative singular were identical in all the types not included except the feminine *wō*-stems, e.g. *sceadu* and *mæd*. The development of these is complicated by certain factors that do not enter into the development of the feminine *i*-stems, *jō*-stems, and long *ō*-stems but in principle is the same.

²³ If the addition of *e* in the feminine nominative singular began before the levelling of unaccented vowels was completed the analogical process would not have had the support of the types *lufe-lufe* and *tunge-tunge* but would have had that of all the other types included in the proportion.

APPENDIX

The data upon which the preceding study is based are as follows:⁵⁰

Cambridge MSS

Corpus Christi College 41 (XI)

1. Bede, *Ecclesiastical History*, ed. Schipper, *Bibliothek der angelsächsischen Prosa*, IV, 81-83, 99-136.
2. forespecenan 99, 2239; elreordi[g]an 135, 667; wiðfeotendan 135, 668
3. geþafa 113, 180
4. untrumnesse 82, 1828; 82, 1835

Corpus Christi College 41, margin (XI)

2. *Martyrology*, ed. Herzfeld, E.E.T.S., pp. 2-10, 18.
 2. miclan 8, 2
 3. oxa 2, 19
3. *Harrowing of Hell*, ed. Hulme, *Modern Philology*, I, 610-614.
 2. foton 611, 22; ðan, þan 610, 17; 612, 3, 27; 613, 18, 35, 41; hwan 613, 6, 10
 3. See LFn 14 (4)
 4. siniðpe 611, 15

Corpus Christi College 140 (early XI)

4. *St. John's Gospel*, ed. Bright, pp. 1-50.
 2. sundorhalgon I:24; gyfton II:2; þyson II:12; strengon II:15; dagon II:19; feowertigon wintron II:20; þyson III:22; IV:13; IV:37; wordon IV:39; dagon IV:43; hwylycon IV:52; þyson V:1; sumon wordon V:14; Iudean V:15; syluon V:26; sylfon V:26; þyson VI:1; leorningenihton VI:3; VI:12; berenan hlafon VI:13; leorningnihtan VI:22; hlafon VI:26; etc.

⁵⁰ The approximate date of the MS (if given by the editor or accessible to me in a catalog of the MSS) is indicated in parentheses after the MS notation. After (2) are cited the examples of change of *m* to *n* in each text; after (3) the examples of loss of *n*; after (4) the examples of the analogical final *e* in the nominative singular of feminine nouns. The examples of loss of *n* cited in my paper: *Loss of Final n in Inflectional Syllables of Middle English* (LANGUAGE, 3. 232-59) are not repeated here but are referred to by the abbreviation LFn; e.g. the abbreviation LFn 14 (4) under text 3 indicates that the examples of loss of final *n* in this text are to be found under text 14 of the Appendix of that article (257ff.) and that the number of examples there given is 4. The abbreviation etc. after the last example in an exhibit shows that the text contains other examples that I have not cited; when it occurs after an example that is not the last it shows that the text contains other examples of the same form. The references are usually to page and line or to line alone. Accents and marks of quantity are not reproduced.

Corpus Christi College 140, later hand (XI)

5. *Observance of Sunday*, ed. Priebisch, *Otia Mersiana*, I, 129ff.
 2. gaton 2; hwilcon 14; eagon 39; eallon 41; lytlan 61; breostan 87; halgan 90; eagon 91; handon 91; þison 101
 3. willa 3, note; wiðtuga 93, note

Corpus Christi College 162 (XI)

6. *On the Observance of Sunday*, ed. Napier, *Furnivall Miscellany*, pp. 357-362.
 2. ðan 358, 9 f.b.; wæðlan and wudewan 358, 6 f.b.; cyrican 360, 17; steorran 360, 2 f.b.

Corpus Christi College 173 (c. 1100)

7. *Chronicle*, late interpolations in Parker MS, printed by Plummer in italics; ed. Plummer, *Two of the Saxon Chronicles Parallel*.
 2. rihton p. 8; Seaxon p. 12; þan p. 18; rihtan p. 22; þysan p. 52; þan p. 104
 3. None
 4. witegunge p. 22

Corpus Christi College 178 (XI)

8. *Exameron*, ed. Crawford, *Bibliothek der angelsächsischen prosa*, X.⁴¹
 2. ðinan 77; gegadan 300
 3. drihte 454
9. *Interrogationes Sigewulfi*, ed. MacLean, Halle, 1883, lines 1-300.
 2. swutelungean 17; micclan 43; þan 55; ærran 99; hwilon 114; 120 (twice)
10. *Rule of St. Benedict*, ed. Schröer, *Bibliothek der angelsächsischen prosa*, II, 9-23, 32-36, 45-64.
 2. niwan 9, 6; hwilon 9, 15; þweoran 18, 7; micclan 32, 2; þisan 33, 9; scortan 34, 10; nihton 34, 10; rican 45, 15; mannan 45, 15; eallan 51, 9; godan 54, 16; þysan 57, 10; ælcen 57, 19
 3. willa 22, 2; slapule 47, 17

Corpus Christi College 191 (early XI)

11. *Rule of Chrodegang*, ed. Napier, E.E.T.S., pp. 1-63.
 2. nanon 9, 25; gerysnon 10, 24; þingon 10, 34; getrywestan 19, 18; þingan 21, 27; domon 25, 14; gesettan 32, 29; ælcen 33, 12; rican 33, 21; etc.
 3. See LFn 20 (5); also: a (for on) 36, 30; ma (for indefinite man) *passim*

⁴¹ Crawford prints the text of Hatton 115 and gives the variants of the other MSS.

Corpus Christi College 198, f. 145⁵²

12. *Ermahnung gegen einige laster*, ed. Assmann, *Bibliothek der angelsächsischen Prosa* III, 144-150.
 2. wisan 106; mannun 132, note; ungeændudan 134
 3. sceolde 100, note
 4. andlifne 32, note; rihtwisnysse 107, note

Corpus Christi College 198, f. 374b; different hand from preceding

13. *De Sancto Johanne*, ed. Kluge, *Englische Studien*, VIII, 477-479.
 2. None
 3. otun (for on tun) 9
 4. dune 7

Corpus Christi College 198, f. 386; different hand from both preceding

14. *Legend of St. Andrew*, ed. Bright, *Anglo-Saxon Reader*, pp. 113-128.
 2. miclen 113, 11, note; wyrstan 124, 27

Corpus Christi College 201, first hand (XI)

15. *Fragment of Regularis Concordia*, ed. Zupitza, *Archiv. f.d. Studium d. neueren Sprachen*, LXXXIV, 1ff.
 2. alban 11; cildon 20; candelan 28; þan 43; 45; swiguhtan 57; þan 72; foresædon nihton 81; gedremæn 87, note; þan 137; þenan 194; þan 209
 3. o (for on) 56

Corpus Christi College 201, second hand (XI)

16. *Wulfstan's Homilies*, ed. Napier, homilies 27, 28, 38, 39, 41; pp. 128-134, 180-181, 190-191.
 2. bocan 130, 11; swilcan 130, 14; þillican bisenan 132, 5; suman 132, 8; rihtan getrywðan 132, 22; þegnan 132, 24; yldran 134, 1; hetelican 180, 10; penigan 181, 9; scillingan 181, 10; bedridan 181, 14; æghwilcan 181, 20; ælcan 181, 24; 181, 26; sinfullan 190, 14; wislican laran 191, 15
 3. gehwilca 129, 2, note
 17. *Aelfric's First letter to Wulfstan*, ed. Fehr, *Bibliothek der angelsächsischen Prosa*, IX, 68-140.
 2. cristenan tidan 8a; ælcon 40; siðan 71; wican 82; ænigan 155a; sumon 173; clænan 189; rihtan 200; gastlican wæpnan 200a
 18. *Hadbot*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 464-469.
 2. siðan 1; godecundan 5; 6; 7; 8; godecundan rihtlagan 11
 19. *Apollonius of Tyre*, ed. Zupitza, *Archiv. f.d. Studium d. neueren Sprachen* XCVII, 18ff.
 2. gehywedan 19, 9; andweardan 23, 11; þillicon þingon 30, 31; gimmon 31, 20; fullon 31, 29; minon 31, 38; cynelican 32, 2; limon 33, 3

⁵² James, *Descriptive Catalogue of MSS of Corpus Christi College*, 1. 475, says as to the date of this MS merely that it is in various hands of the tenth and eleventh centuries.

3. twege 18, 22, note; æghwano 19, 17, note; mitta 23, 4, note; tharsysce 23, 11; hungrige 23, 7, note; nama 23, 20, note; ungecnawe 27, 33, note
4. ceastre 18, 4; smiltneſse 23, 36; mildheortneſse 30, 7

Corpus Christi College 302 (XI)

20. *Ueber das jüngste gericht*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 164-169.
 2. eagan 39; ælcān 63; ecan 76; soþfæstan 119
 3. goda lichama 93, note; a (for on) 125
 4. sawle 93
21. *Exameron*, ed. Crawford, *Bibliothek der angelsächsischen Prosa*, X.⁵³
 2. oþran 140; upplican 155; 156; gearlican þingon 218; bradan 237; sceortan sweoran 257; ælcon 377; earman 394; lichamlican 405
 3. See LFn 12 (4)
 4. bradnesse 136; ðrynesse 338

Corpus Christi College 303 (XII)

22. *Aelfric's Homily on Judith*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 102-116.
 2. þan, ðan 191; 275; 282; 349; 357; gewissan 248
 3. See LFn 2 (3)
23. *Excommunicatio*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 438f.
 2. eallen steden 13; recgan 14
 3. halige 2
24. *Passio Beatae Margaretae*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 170-180.
 2. sawlen 29; gecorenan 30; halgan 32; þan 37; godan 90; fotan 118; þan mannen 138; handan 147; þan 152; toþan 184; hwiten 184; eagan 185; þan 201; 216; sumen 239; etc.
 3. See LFn, number 6 in Table I, p. 238 (244)
 4. sawle 63; 136

Corpus Christi College 322 (XI)

25. *Gregory's Dialogues*, ed. Hecht, *Bibliothek der angelsächsischen Prosa*, V, 44-111.
 2. ylcan 58, 19; oþran 63, 2; ylcan 71, 1; gledan 75, 19; þan 78, 32; sceancan 82, 28; etc.
 3. þæt . . . sy onlihte and geþenede þa ingeþancas (MS H has *beon*) 94, 20f.
 4. ungewittignesse 58, 1

Corpus Christi College 367 (c. 1100)

26. *Vision of Leofric*, ed. Napier, *Transactions of Philological Society*, 1908, pp. 180-188.
 2. healf-slapendon 3; swetan 10; gangdagan 11; anan 36; cnapan 43; nihton 89

⁵³ See note 51 above.

Corpus Christi College 383 (1125-1130)⁵⁴

27. *I Aethelred*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 216-220.
 2. eallon *Prolog*; ælcon 1; hundredan 1, 3; oðran 1, 6; agenon 1, 10;
 oþran 2, 1; eallon 4
 3. None
 4. geræddnysse *Prolog*
28. *Sverian*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 396-399.
 2. fullan 2; ælcon 9
29. *Rectitudines*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 444-453.
 2. sumon 2; 3; halgan 3, 4; ælcan 3, 4; swilcan ðingan 3, 4; suman 4; 4;
 sumen 4, 5; suman 4, 5 (twice); 5, 1; gehwilcon 6, 3; anan 8; folgeran 10;
 sceaphyrdan 14
 3. See LFn 19 (4)
30. *Be Gesceadwisan Gerefan*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 453-455.
 2. husan 13; horsan 13; husan 14; tolan 16; leodgotan 16; oðran wyrhtan 16; holdan 18, 2; gemetfæstan 18, 2
 3. me (for *men*); crocca 17

Corpus Christi College 419 (XI)⁵⁵

31. Wulfstan's *Homilies*, ed. Napier, homilies 23, 24, 42, 43, 45, 46; pp. 116-122, 191-215, 226-242.
 2. halgan tidan 118, 2; rihtan 121, 1; godan þeawan 121, 1; þearfican dædan 121, 2; ecan 121, 10; hwilon 194, 10; wisan 196, 19; rihtan 197, 6; ecan 204, 20; lufan 204, 21
 3. fyrenfulle 212, 25; ælmessa 228, 19
 4. swylec yrmð and earfoðnesse bið 192, 7
32. *Ermahnung zu christlichem leben*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 138-143.
 2. scriftan 69; dædan 138

Corpus Christi College 421 (XI)⁵⁶

33. Wulfstan's *Homilies*, ed. Napier, homilies 47, 49, 50; pp. 242-245, 250-274; variants to homily 48, pp. 246-250.
 2. halgan 251, 7; soþfæstan 256, 19; hean 262, 13; deorwyrþestan 262, 23; ælcan 266, 5; þisan 270, 30; þyson 272, 25; rihtan getrywðan 272, 28
 3. fram awerigednesse and mæne aðum 246, 14f, note
 4. sawle 248, 18, note; modignesne 249, 5; fylðe 249, 8; swa todæleð lic and sawle 264, 4f.

⁵⁴ All four texts appear to be in the same hand.

⁵⁵ This MS, according to James (2. 311), is all in one hand; see note 56 below.

⁵⁶ Homilies 47, 48, and 49 in this MS are in the same hand as that of CCC 416 but homily 50, pp. 266-74, is in a different hand (James, 2. 314).

Corpus Christi College 422 (XI)

34. *Altenglische Ritualtexte für Krankenbesuch*, ed. Fehr, *Festgabe für F. Liebermann*, pp. 48-67.

2. None
3. andette 51, 10
4. seo untrumnyse 61, 58

Trinity College B 15. 34

35. *Homily on John XVI:16-22*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 73-80.

2. bysmorlican 79

University Library Gg III 28

36. *Selected Homilies of Aelfric*, ed. Sweet.

2. lichaman 15, 305; rican 23, 212; geferan 62, 210; wæccan 62, 217; sumon 66, 65; foton 67, 88; fealwun 67, 3, note; foton 69, 185; 70, 202

University Library Ii I 33

37. *Passio Sancti Vincentii*, ed. Skeat, *Lives of Saints*, E.E.T.S., II, 426-442.

2. suman 216; softan 216; sarmun 219; to pam feldan middan 237; hwilon 245

3. sceolde 50; winne 66

4. seo gerecednyse 9

38. *Genesis*, ed. Chase, *Archiv f. d. Studium der neueren Sprachen*, C, 241ff.

2. handan IV:23; pan X:15-18; fullan XXIII:16

3. sunde (for sindon) X:31; bebyrige XXIII:6; mine XXIV:3

4. hiwredæne X:32

University Library Ii II 11 (XI)

39. *Gospel of Nicodumus*, ed. Hulme, *P.M.L.A.A.*, XIII, 457ff.

2. cnyhton 476, 23; ealdron 480, 20; þyson 480, 22; cempon 484, 4; hwylcon þyngon 484, 22f.; cempon 486, 16; 488, 13; ærendracon 490, 30; ælcon 504, 32; 506, 12; gewriton 512, 34; hyrdon 514, 21

3. onhangena 486, 28

40. *Legend of St. Veronica*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 181-192.

2. mynon 38; hlafon 50; eallon 118; leorningnihton 224; ælcon 307

3. eage 8

University Library Kk III 18 (XI)

41. Bede, *Ecclesiastical History*, ed. Schipper, *Bibliothek der angelsächsischen Prosa*, IV, 1-11, 18-50.

2. læssan p. 9, 48; halwendan 302; myclan 371; clænan 545; torran 762; strangestan 875; sylfan landbigengan 903; hean 947

3. See LFn 7 (6)

4. seo ehthnyse 265; 526; wællhreownysse 794

London MSS

Cotton Caligula A 7 (XI)

42. *Charm*, ed. Grendon, *Journal of American Folk-Lore*, XXII, 172-176.

2. heardan beaman 8; turfon 16; ælcon 19; siðon 25; aþenedon earmon 42; eallon 45

Cotton Claudius B 4 (XI)

43. *Heptateuch*, ed. Crawford, *E.E.T.S., Exodus*, pp. 212-285.

2. ælcon I:14; þyson, ðyson II:1; III:21; IV:9; V:1; etc.; Egypton III:9; Egyptyscan III:22; hean VI:6; heardan VI:9; hofon VIII:24; ðingon X:16; Egyptiscan XII:35; XII:39; lytlan XVII:4; ðingon XVIII:19; ealdron XVIII:25; fyrdwicon XIX:16; dagon XX:11; etc.

3. See LFn 15 (6)

Cotton Cleopatra B 13

44. *Wulfstan's Homilies*, ed. Napier, homilies 37, 40, 54; pp. 175-179, 182-190, 277-282.

2. manegan cynrynan 176, 12; godeundan lareowan 176, 22; bodan 177, 9; feondan 177, 10; freondan 177, 11; swylcan 178, 5; synnan 178, 17; godeundan hyrdan 178, 22; ærran gewyrhtan 182, 6; sumon 185, 5; ænigan 279, 13; eorðlican 279, 25

Cotton Domitian A 8 (XI)

45. *Chronicle*, ed. Thorpe, pp. 241-329.⁸⁷

2. þan flotan p. 251; ðysan p. 251; scipan p. 255; oðran p. 257; þan oðran scipan p. 261; ðysan p. 261; ðison p. 265; ðan p. 269 (twice); fullan p. 271; ærendracan p. 273; scipon p. 277; eallan p. 285; etc.

3. See LFn 6 (7); also a fleame (for *on fleame*) p. 257

4. herehuðe p. 241

Cotton Julius E 7 (XI)

46. *Aelfric, Lives of Saints*, ed. Skeat, *E.E.T.S.*, homilies 1, 2, 29, 30; I, 10-50; II, 168-218.

2. hwilon 10, 1; 22, 220; 22, 221 (twice); 24, 222; cristenan 28, 52; þan 178, 41; nanan þingan 194, 60f.; lytlan 198, 146; 200, 156; oþran 204, 217; cildan 206, 276; anan wyrtigan 208, 312; minan 212, 372; godan 216, 446

3. See LFn 3 (3)

4. godnisse 16, 90; unrotnisse 16, 107; æmylnysse 16, 107; modignysse 16, 109; snoternysse 20, 157; unrihtwisnyse 34, 160; anlicnyse 192, 43; mildheortnyse 212, 377

⁸⁷ Omitting the passage (apparently by a different hand) which Thorpe prints in brackets and footnote, pp. 244ff.

Cotton Nero A 1 (XI)

47. *I Cnut, II Cnut*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 278-370.
 2. ælcon frigan 294, 11, 1; nihton 296, 17; godcundan lareowan 302, 21; gehalgedan 304, 22, 5; æghwylcan 310, 4; synnan 312, 6; ælcan 314, 8; nanon þingon 314, 8, 1; ælcan 322, 20a; ungetrywan 324, 22, 1; etc.
 3. None
 4. gewitnesse 328, 24, 3
48. *Grið*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 470-473.
 2. oðran 12; gebyrdan 21; godcundan ealdran 21; heanan gebyrdan 21; lænan 21; lytlān 21, 1; 23; miclan 21, 1; 23; godeundan rihtlagan 24; etc.
 3. bute (for butan) 16

Cotton Otho B 10

49. *Wulfstan's Homilies*, ed. Napier, homily 58, pp. 299-306.
 2. witan 306, 5

Cotton Otho C 1

50. *Two Lives from De Vitis Patrum*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 194-198.
 2. sumum westānsetlan 195, 1
 3. a morgen (for on morgen) 197, 51

Cotton Otho C 1, different hand (XI)

51. *Malchus*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 199-207.
 2. æfter þan 199, 139
 3. See LFn 18 (3)
52. *Wynfrith's Letter*, ed. Sisam, *Modern Language Review*, XVIII, 253-272 (in same hand as *Malchus*).
 2. yfelan 81, halgan 97; 138; wyrrestan 161
 3. None
 4. seo . . . miltse 104

Cotton Tiberius A 3, first hand (XI)⁵⁸

53. *De Consuetudine Monacharum*, ed. Logeman, *Anglia* XIII, 408-440.
 2. be fullan 1134; lichamlican 1161; to soþan 1166
 3. gegaderude 687; ylca 700; ceace 716; mid eallum gebroþru 769; ongea (for ongean) 897
 4. þenunge 981; onfangenesse 1048
54. *Prayers*, ed. Logeman, *Anglia*, XII, 511-518.
 2. eallan 514, last line; soðan 515, 10; nanan oðran 516, 17; nanan 516, 6 f.b.; þinan 517, 9; ælcan 517, 12; þisan 518, 13 f.b.; suman 518, 13 f.b.; etc.
 3. None
 4. þæt is gitsunge 518, 14⁵⁹

⁵⁸ For a very full description of the MS and information as to the various hands see Förster, *Archiv f. d. Studium der neueren Sprachen* 121. 30ff.

⁵⁹ This is a rather questionable example of analogical final *e*, for seven feminine nouns in *-nes* follow immediately after in the same construction.

Cotton Tiberius A 3, second hand (XI)

55. Aelfric's *Colloquy*, ed. Wright and Wülfker, *Anglo-Saxon and Old English Vocabularies*, I, 88-103.
 2. gefæstnodon 90, 16; minon 91, 11; nettan 92, 9; hwilon 92, 16; 93, 14; 94, 9; etc.; mynan 95, 1; neton 95, 1; micclan 96, 15; etc.
 3. mæssa 101, 4 f.b.
56. Wulfstan's *Homilies*, ed. Napier, homilies 36, 44, 51-53; pp. 172-175, 215-226, 274-277.
 2. berenan 173, 10; grenan wyrtan 173, 11; hwilan 173, 17; etc.; þearfan 174, 2; ænigan 174, 6; eallan 174, 12; 174, 15; feondan 174, 13; 174, 18; þysan ylcan 174, 20; manegan 174, 20; etc.
 3. See LFn 24 (4); also: age (for *ongen* 218, 32; a (for *on*) 224, 31; me (for *men*) 275, 7
 4. saule 218, 13; þyfðe 274, 23
57. *Sign Language (Indicia Monasterialia)*, ed. Kluge, *Internationale Zeitschrift f. allgemeine Sprachwissenschaft*, II, 118-129.
 2. scytefingran 13; þinum earon 90
 3. See LFn 22 (2)
58. *Lapidary*, ed. Fleischhacker, *Zeitschrift f. deutsches Altertum*, XXXIII, 229-235.
 2. luttran VII; VIII; wexsendan XVII; waniendan XVII
 3. None
 4. ansyne XXII
59. *Homily*, ed. Kluge, *Englische Studien*, VIII, 472-474.
 2. None
 3. None
 4. None
60. Aelfric's *Second Old English letter to Wulfstan*, ed. Fehr, *Bibliothek der angelsächsischen prosa*, IX, 147-171.
 2. sam-cucan 12; þan 14; 27
 3. None⁶⁰

Cotton Tiberius A 3, fourth hand (XI)

61. *Rule of St. Benet*, ed. Logeman, *E.E.T.S.*⁶¹
 2. *passim*
 3. lysta 21, 12; gehyra 21, 13; mæsta 68, 6
 4. neode 57, last line; forgimeleaste 68, 9

Cotton Tiberius A 3, fifth hand (XI)

62. *Fragment of translation of Aethelwold's De Consuetudine Monachorum*, ed. Breck, Leipsic, 1887, pp. 16-26.
 2. lytlon þingon 13
 3. ma (for *man*) 22; me (for *men* or *man*) 70; 78
 4. stefne 39

⁶⁰ I regard as a scribal error the MS *me* for (stressed) *men* in 12.

⁶¹ My data as to the language of this text are chiefly derived from Logeman's introduction, especially sections 39, 75, 78, 81, 87.

Cotton Tiberius A 6

63. *Chronicle*, ed. Thorpe, pp. 136-200.

2. ðan p. 176; dicon p. 180; gangdagan p. 186; Wæringwicon p. 186; fullan p. 188; pundon p. 188; nehstan p. 188; þrim wucan p. 192

Cotton Tiberius B 1 (XI)⁶²

64. *Chronicle*, ed. Thorpe, pp. 248-336.

2. scypon, scipon, p. 254; p. 260; p. 262; p. 264; etc.; fullan p. 270; eallon p. 272; fullan p. 276; eallon p. 278; lytlan p. 280; ðingon p. 284; gearon p. 298; þison p. 298; eallon ungewederon p. 302; etc.
3. a (for *on*) p. 266; betsta p. 304.⁶³

Cotton Tiberius B 4 (XI, XII)

65. *Chronicle*, ed. Thorpe, pp. 248-350.

2. scypon p. 250; flotán p. 250; wucan p. 254; scypon, scipon p. 260; p. 262; p. 264; etc.; eallon p. 278; litlan p. 280; aðan p. 284; þisan p. 286; myccelan p. 286; eallon p. 288; etc.
3. See LFn 5 (9); also: micle (weak adjective) p. 250; a (for *on*) p. 266
4. are p. 254; Grantabricscire p. 262.⁶⁴

Cotton Vespasian D 21 (XI)

66. *St. Guthlac*, ed. Gosser, *Anglistische Forschungen*, XXVII.

2. godecundlican 112, 96; hwilon 113, 4 (twice); menigfealdan 113, 6; ongyrlican 130, 170; sweartestan 130, 176; earman 133, 225; heofonlican 165, 86; mid þan oðron (sing.) 173, 16
3. See LFn 23 (5)
4. mildheortnysse 142, 22; unclænnysse 148, 8; untrumnysse 162, 22; metrumnysse 162, 26; ongitenysse 162, 27; uneþnysse 163, 37; untrumnysse 163, 52; forðfore 168, 144; glædnysse 170, 175

Cotton Vitellius A 15 (XI or early XII)⁶⁵

67. *Aelfred, Soliloquies*, ed. Hargrove, pp. 1-40.

2. rihton 37, 13
3. See LFn 1 (11); also: betweona 28, 13; 28, 14; 28, 15
4. soðfæstnesse 6, 6; godþrimnesse 9, 14; seo saule 29, 12; gedrefnesse 33, 7

⁶² This MS is in various hands but there is not more than a few years difference between the earliest and latest, 1066; see Plummer, *Two of the Saxon Chronicles Parallel* 2. xxxi.

⁶³ On p. 240 (not included in the material I used) occurs *herehybe*, an example of analogical final *e* in the feminine nominative singular.

⁶⁴ On p. 240 (not included in the material I used) occurs *herehupæ*, another example of analogical final *e* in the feminine nominative singular.

⁶⁵ This MS, written in two hands, is the first part of the *Beowulf* codex but entirely distinct from it in origin.

Cotton Vitellius A 15 (XI)⁶⁵

68. *Gospel of Nicodemus*, ed. Hulme, *P.M.L.A.A.*, XIII, 473-515.
 2. cnihton 477, 29; mæssepreosten 483, 30; cempon 485, 7; 487, 16; 489, 14; erendracan 491, 31; hyrdon 515, 23
 3. See LFn 13 (21)
 4. þeo beorhtnisse 497, 11; seo helle 503, 18; 503, 22

Cotton Vitellius A 15 (XI)⁶⁶

69. *St. Christopher*, ed. Rypins, *E.E.T.S. (Three Old English Prose Texts)*, pp. 68-76).
 2. egeslican 72, 6; fran (for fram) 73, 17

Cotton Vitellius C 5

70. Aelfric, *Be þære halgan clænnysse*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 13-23 (lines 13-225).
 2. for nanum oðran þinge 160

Harleian 55 (XI)

71. *Læceboc*, ed. Leonhardi, *Bibliothek der angelsächsischen Prosa*, VI, 84-87 (ending at line 9).
 2. saran 84, 29; þan 85, 6; hnescan 85, 15
 3. See LFn 17 (2)

Harleian 585 (XI)

72. *Lacnunga*, ed. Leonhardi, *Bibliothek der angelsächsischen prosa*, VI, 121-126.
 2. þan 121, 20; ælcān 123, 1; nihtan 123, 3; wyliscan 123, 4; þinan 123, 20; breostan 124, 18; siðan 125, 20; ðinan 125, 22

Royal 2 B 5 (XI)

73. *Prayers*, ed. Logeman, *Anglia*, XII, 499-511.
 2. þisson 500, 7; þinan 503, 3; soþfæstan 503, 11; suman spearcan 508, 2

Royal 7 C 4 (XI)

74. *Defensor's Liber Scintillarum*, ed. Rhodes, *E.E.T.S.*, pp. 1-43, 101-119, 213-222.
 2. hwilon 104, 9; siþan 108, 14; tosoþan 109, 12; 110, 5; gewyrhton 119, 12
 3. See LFn 10 (2)
 4. eadmodnysse 101, 5

⁶⁵ This is the second part of the *Beowulf* codex and the hand is that of the first hand of *Beowulf*.

Royal 12 D 17 (X)

75. *Læceboc*, ed. Leonhardi, *Bibliothek der angelsächsischen prosa*, VI, 6-11.
2. ærestan 6, 22; on eagon 11, 26

Oxford MSS

Ashmole 328 (XI)

76. Byrhtferth's *Handboc*, ed. Kluge, *Anglia*, VIII, 298-301, 312-314, 322-324, 335-337.
2. siðon, siðun 298, 20; 299, 6; etc.; arun 299, 38; æceron 300, 25; wisan 313, 17
3. See LFn 9 (8)
4. heora endebyrdnyse ys 314, 33
77. Wulfstan's *Homilies*, ed. Napier, homily 48, pp. 246-250.
2. None
3. godes þa gecorene
4. sawle 248, 18; fylðe 249, 8

Bodley 180 (early XII)

78. Boethius, ed. Sedgfield, continuous parts of text from MS B, pp. 7-11, 14, 21, 26f., 33f., 46f., 48ff., 51f., 57f., 64, 67f., 69, 71, 73f., 79ff., 89, 94ff., 101, 105, 115f., 124, 125f., 135 f., 141, 146f.
2. ðan 14, 13; swiran 46, 8; lænan 74, 8; innweardan 94, 28
3. See LFn 8 (2);⁶⁷ also: buta (for *buton*) 11, 18

Bodley 340 (XI)

79. *Homily on John XIII:1-30*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 151-163.
2. ecan 164
3. See LFn 16 (2)

Bodl. Lib. Auct. F IV 32

80. *Discovery of the Sacred Cross*, ed. Morris, *Legends of the Holy Rood*, *E.E.T.S.*, pp. 3-17.
2. rihtan 5, 2 f.b.; halgan 7, 1; stanen 9, 8 f.b.; healfeon [sic] 13, 19; næglan 17, 6
3. mære 5, 10; 13, 17
4. awyrgednesse 7, 21; rode 11, 18; 15, 3 f.b.; 17, 18

Bod. MS Eng. hist. e 49 (XI)

81. *Fragments of Orosius*, ed. Napier, *Modern Language Review*, VIII, 59-63.
2. ilcan 2, 5; oþran 2, 11

⁶⁷ The form *micle* given in my former paper should be deleted. It is not a weak adjective and does not show loss of *n*.

Hatton 76

82. Gregory's *Dialogues*, ed. Hecht, *Bibliothek der angelsächsischen prosa*, V, 1-10, 14-43.
 2. hwilon 1, 8; sumon 3, 2; lefan 5, 24; nyðerlican 6, 27; sumon 10, 10; þam Gotan 10, 24; sumon 20, 18; 30, 29

Hatton 114, formerly Junius 22 (XI)

83. *De Nativitate Sanctae Mariae*, ed. Assmann, *Bibliothek der angelsächsischen Prosa*, III, 117-137.
 2. þearfan and wydewan 51; þan 122; nænigan 258; wynsuman 303; yldran 440
 3. See LFn 11 (2)
 84. Wulfstan's *Homilies*, ed. Napier, homily 55, pp. 282-289.
 2. rican 286, 14; rihtwisan 288, 25; læstan 288, 26

Hatton 115 (XI)

85. *Exameron*, ed. Crawford, *Bibliothek der angelsächsischen prosa*, X.
 2. hwilon 1; 106
 3. eorða 213

Hatton 116, formerly Junius 24 (XI or early XII)

86. *Life of St. Chad*, ed. Napier, *Anglia*, X, 141-148.
 2. eorðlican 74; heofonlican 74; untruman 234
 3. lichama, note to line 75 and note on p. 50
 87. *Rogation-week homily*, ed. Förster, *Der Vercelli Codex CXVII*, pp. 112-121.
 2. blodigan 115, 7; arleasan 117, 4; micclon 120, 2
 3. ahof up in heofene hyhðo 113, 5^{ss}
 4. beorhtnesse 120, 7

Junius 99

88. Wulfstan's *Homilies*, ed. Napier, homilies 1, 2; pp. 1-20.
 2. suman 7, 14; ecan 8, 9; earfoðan 9, 14; ecan 18, 5; 18, 7; myclan 19, 2

Junius 121 (XI)^{ss}

89. Aelfric's *Second Old English letter to Wulfstan*, ed. Fehr, *Bibliothek der angelsächsischen prosa*, IX, 146-220
 2. wisan 2; synnon 10; sameucan 12; lichamlican 102; sumon 105
 90. Wulfstan's *Homilies*, ed. Napier, homily 26, pp. 125-127
 2. ecan 126, 22

^{ss} This is not a certain example of loss of *n*, for *heofon* (usually masculine) is sometimes feminine in late OE; I assume, however, that we have here the genitive singular of the very much more frequent *heofene*, feminine *n*-stem.

^{ss} This MS, according to Fehr, is in several hands.

91. *Benediktiner-Offizium*, ed. Feiler, *Anglistische Forschungen*, IV.
 2. seofonsiðon 55, 5; rihtan 58, 1; ecan 74, 2; suman 80, 12; dæghwamlican
 tidanþenungan 80, 6; neodan 80, 10
 3. None
 4. mildse 58, 11; higefrofre 59, 5; frofre 59, 8; sawle 69, 10; 69, 14⁷⁰

Lakeland Fragments, Bodl. Lib. (XI)

92. *St. John's Gospel*, ed. Bright, pp. xxix-xxxvii.
 2. ðison II:12; strengon II:15; dagon II:19; feowertigon wintron II:20;
 ðison III:22; leorningnihton VI:22; hlafor VI:26; þison VI:51; sylfor
 VI:61; ðison VI:61; þison VII:8

Laud E 381⁷¹

93. Aelfric, *Be Hester*, ed. Assmann, *Bibliothek der angelsächsischen prosa*,
 III, 92-101.
 2. of Medan and of Persan 51; gewissan 227; cynelican 231; þingon 263
 3. ræde 47, note; acwelle 262, note
 4. receleasnyse 153

Laud 482 (XI)

94. *Allenglische Ritualtexte für Krankenbesuch*, ed. Fehr, *Festgabe für F. Liebermann*, pp. 46-66.
 2. þam gehalgodon axan 57, 45
 3. gastlice 47, 1
 4. seo endebyrdnesse 65, 126

Laud 509 (XI)

95. Aelfric, *On the Old and New Testament; Judges*, ed. Crawford, *E.E.T.S.*,
 pp. 15-51, 64-75, 401-417.
 2. hwilon 661; hundseofontigon 732; þan 1240; godan 1259; geferon
Judges III:21; gramlican IV:2; Denan p. 416, 80
 3. See LFn 4 (9); also willa (weak noun singular) 416, 68
 4. soðfæstnisse 32; bradnyse 1161

Corpus Christi College 279 (late X or early XI)

96. Bede, *Ecclesiastical History*, ed. Schipper, *Bibliothek der angelsächsischen prosa*, IV, 51-80.
 2. nydðearflican 1318; ærran 1648
 3. sceole 1352; ælmesse 1421, note

⁷⁰ All the examples of analogical final *e* in feminines are in the verse parts of the text and all the examples of *n* for *m* are in the prose.

⁷¹ This MS is a seventeenth century copy transcribed by William De L'Isle from a MS now lost.

St. John's College

97. Aelfric's *Grammar*, ed. Zupitza, pp. 2-11, 108-111, 119-129, 289-296.
 2. hwilon 7, 7; 7, 8; 7, 9; 7, 10; stafon 7, 8, note; oðron 121, 9, note;
 hwilon 127, 14; be fullon 289, 12; be fullan 289, 14; wison 290, 9

Other MSS

Blickling Hall (X)

98. *Blickling Homilies*, ed. Morris, *E.E.T.S.*, homilies 2, 3, 18; pp. 15-39, 211-227.
 2. for urum lufon 23, 24; ecan 37, 4; þan 213, 22; untruman 223, 25; Cristenan 227, 14
 3. oþon leohte (for on þon) 21, 16

Lambeth 489 (early XI)

99. Wulfstan's *Homilies*, ed. Napier, homily 57, pp. 291-299.
 2. þan 293, 31; hwilon 295, 22; hwan 296, 15; siðan 296, 26; lyðran 297, 26; þan 298, 6; þison 298, 10; 298, 12
 100. *Two homilies of Aelfric*, ed. Brotanek, *Texte und Untersuchungen zur altenglischen literatur und kirchengeschichte*, pp. 3-27.⁷²
 2. nanon deorwurðan 158a, 2, note; hwilon 158a, 9; rican 159a, 5; eallon 165a, 6, note; ænigon þingon 166a, 21, note; etc.
 3. anda 166a, 17, note

Lincoln 295. 2 (XI)

101. *Lincoln Fragments of Heptateuch*, ed. Crawford, *Modern Language Review*, XV, 1-6.
 2. siðon Numbers XIV:22⁷³

Paris, Bibl. Nat. Lat. 943 (early XI)

102. *Two homilies of Aelfric*, ed. Brotanek, *Texte und Untersuchungen zur altenglischen literatur und kirchengeschichte*, pp. 3-27.
 2. hwilon 158a, 9; þan 158a, 13; rican 159a, 5; hwylcun 168a, 7

Paris, Bibl. Nat. Fonds Lat. 8824 (XI)

103. *West-Saxon Psalms*, ed. Bright and Ramsay, pp. 1-50.
 2. gewyrhton III:6; gewyrhtan VII:9; yfelan IX:22; siðon XI:7; uran XVII:30; breoston XXI:8; þyson XXII:Int.

⁷² Brotanek prints the text of Bibl. Nat. Lat. 943 and the variants of Lambeth 489.

⁷³ In *Numbers* XII:10 appears the form *hreoſnysse* where the other MSS have *hreoſnys*, feminine nominative singular. But the MS is very fragmentary at this point and *-nende hreoſnysse* are the only words legible in a space corresponding to about twenty words in Laud 509. I therefore disregard this possible example of analogical final *e* in the feminine nominative singular because the form may not really have been nominative in the Lincoln MS.

Rochester Cathedral, "Textus Rossensis" (early XII)

104. *VI Aethelstan*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 173-183.
 2. nanan 1, 1; healfan 6, 1; 6, 3; fullan 6, 4; nihtan 8, 6; nihton 8, 7;
 bisceopan 10
105. *Gebyncðo*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 456-459.
 2. mistlicon neodan 3
106. *Wilhelm I: Lad*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 483-484.
 2. ænigan þingan 1; ylcen þingan 2; eallan . . . þingan 3; þingan
 3, 1; unfordan 3, 2
 3. utlaga 3

Vercelli Codex 117 (X)

107. *Vercelli Homilies*, ed. Förster, *Die Vercelli Codex CXVII*, pp. 71-100.
 2. soð-fæstan 72, 9; niwan 80, 9

Wells Cathedral (X or early XI)

108. *Rule of St. Benedict*, ed. Schroer, *Bibliothek der angelsächsischen Prosa*,
 II, 78-122.
 2. cuman 82, 9; þingon 82, 19; 94, 5; cræftigan 94, 2; ecan 102, 22; under-
 þeodan 120, 10

York Cathedral (XI)

109. *Wulfstan's Homilies*, ed. Napier, homilies 59, 60, 61; pp. 307-311.
 2. godcundan lareowan 307, 18; 308, 25f.; gehalgedan 307, 24; nydmagan
 308, 8; gefæderan 308, 9; bysan 309, 23; 309, 24; æghwylcan 309, 27; hwilan
 310, 7; gewelhwylcon 310, 23; twelffealdan 311, 6
110. *Cnut, Pardon of 1020*, ed. Liebermann, *Gesetze der Angelsachsen*, I, 273-275.
 2. fullan 6; eallan 15; eallon 15

ERRATA

LANGUAGE 3. 232-259

- P. 256, note 33, line 5: For *weak* read *verbal*.
 P. 257, text 3: For *I, 10ff., lines 1-428, II, 168ff., lines 1-473* read *homilies 1, 2, 29, 30; I, 10-50; II, 168-218*.
 P. 257, text 8: Dele *micle, 146.9*.

THE GROWTH OF THE GREEK κ -PERFECT

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The Greek κ -Perfect presents the most favorable conditions possible for testing the validity of a widely prevalent theory as well as for detecting the steps by means of which a formation grows from its first beginnings to an extensive category. Since it is formed from only twenty or twenty one verbs¹ in vowel stems in the language of Homer, it is reasonable to believe that these represent, in approximate fashion, the earliest strata of κ -Perfects in the Greek language. We are thus able, as it were, to observe the category in the very process of formation, and a close scrutiny of the Homeric forms ought to give an answer to several questions. Are the verbs such as to give support to the common derivation² of the κ -Perfect from the 'root determinative' κ found in the singular aorists $\xi\delta\omega\kappa\alpha$, $\xi\theta\eta\kappa\alpha$, and $\xi\eta\kappa\alpha$, $\eta\kappa\alpha$ as opposed to the plurals $\xi\delta\omicron\mu\epsilon\nu$, $\xi\theta\epsilon\mu\epsilon\nu$, and $-\epsilon\iota\mu\epsilon\nu$? Or are they rather such as to point to the regular perfects of verbs the stems of which end in κ in the entire verb system, e.g. $\lambda\acute{\epsilon}\lambda\eta\kappa\alpha$: $\lambda\acute{\alpha}\sigma\kappa\omega$ < * $\lambda\alpha\kappa$ - $\sigma\kappa\omega$, or $\xi\pi\tau\eta\kappa\alpha$: $\pi\tau\acute{\eta}\sigma\sigma\omega$ < * $\pi\tau\eta\kappa\acute{\chi}\omega$?³ Or, as so often, has there been a complication of causes in which both classes of patterns played a part? Did the earliest κ -Perfects receive their κ by conscious abstraction of the 'root determinative'⁴ κ , which was identical either with a k -suffix⁵ or particle,⁶

¹ A list of these is found in Monro, *Grammar of the Homeric Dialect*³ 25, and Hirt, *Handbuch d. gr. Laut- u. Formenl.*² 576.

² So, e.g., Brugmann-Thumb, *Gr. Gr.*⁴ 376 f.

³ See Monro 24 f.

⁴ The term 'root-determinative' does not appear below because it can only cause misunderstanding, and would lead to the conclusion that, at least when these elements originated, they were perceived as something distinct from the root itself. But the existence of these ought to mean nothing more than that the root is as unstable as every other part of the word, and that it is subject to the same associative influences as stem suffixes and personal endings and case endings. Thus the μ of Gr. $\tau\rho\acute{\epsilon}\mu\omega$ 'tremble' as opposed to $\tau\rho\acute{\epsilon}\omega$ never had any more of a separate existence or meaning than the $-\epsilon\sigma$ - of the Aeolic $-\epsilon\sigma\sigma\iota$ (dat. pl. ending opposed to $-\sigma\iota$).

⁵ So Persson, *Beitr. z. idg. Wortforsch.* 523 ff.

⁶ Cf. Hirt, *Idg. Gramm.* 3. 236 ff.

or did the κ rather spread to associated words unintentionally, by mere word contamination and without distinct analysis? Obviously if the κ was consciously abstracted from e.g. $\xi\theta\eta\kappa\alpha$ either as a suffix or particle, its spread was not limited by the closeness of association between old and new formations any more than is a new compound or a new word in a vividly apperceived suffix like a diminutive suffix or one for forming abstract nouns of quality. Just as the speaker who first formed English *camphor tree* did not have to think of any special tree like *apple tree*, or as *frankness* may well have been formed without thinking of any particular word in *-ness*, so the spread of the κ of the Greek perfect would in the case mentioned not always follow the lines of congeneric assimilation or those determined by formal similarity, but we would expect even in Homer to find words or groups of words with no close associative bonds of any kind. On the other hand, if the κ -Perfect arose by unconscious association and word contamination, we must expect all the earliest examples to be connected by a network of associations. We must expect, moreover, that the very earliest form, which probably had only one pattern, must show a particularly obvious association with a form in non-formative κ , whereas those which were formed a little later, when two or more associations would work together, need not show connections which are equally close.

With a view, therefore, of finding out whether any support for the doctrine of the origin of the κ -Perfect from the κ of $\xi\theta\eta\kappa\alpha$ and the like can be found; if so, whether it spread at first by unconscious association of words and forms, or by conscious analysis, I have scrutinized the twenty one Homeric examples both from the point of view of form and meaning, in order to determine the extent of the formal and semantic relationship of these earliest κ -Perfects both with each other and with the aorists $\xi\theta\eta\kappa\alpha$, $\xi\eta\kappa\alpha$, and $\xi\delta\omega\kappa\alpha$ ⁷ as well as with perfects of verbs with root in κ , as $\lambda\acute{\epsilon}\lambda\eta\kappa\alpha$ or $\delta\acute{\epsilon}\delta\omicron\rho\kappa\alpha$.

A comparison of these κ -Perfects of Homer with $\xi\theta\eta\kappa\alpha$, $\xi\eta\kappa\alpha$, and $\xi\delta\omega\kappa\alpha$ ⁸ reveals no example which shows a close association with either of the others, but there is one perfect which is so closely related to $\xi\eta\kappa\alpha$ both in form and meaning, that it may reasonably be designated as the oldest example of the κ -Perfect. This is $\beta\acute{\epsilon}\beta\lambda\eta\kappa\alpha$ from $\beta\acute{\alpha}\lambda\lambda\omega$ 'throw'. The similarity of form lies on the surface, while the semantic relation is shown particularly when $\iota\eta\mu\iota$, as frequently, is used of throwing a missile, e.g. A 48 $\mu\epsilon\tau\acute{\alpha}\delta' \iota\omicron\nu \xi\eta\kappa\epsilon\nu$.

⁷ See p. 274 for the possibility of the association of perfect with aorist forms.

⁸ However, see below for a possible minor influence of $\xi\delta\omega\kappa\alpha$ on $\beta\acute{\epsilon}\beta\omicron\omega\kappa\alpha$ and $\mu\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$.

After $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$ in turn, through formal association only, but with some help in this respect from $\xi\eta\kappa\text{-}\alpha$, was patterned $\tau\acute{\epsilon}\text{-}\tau\lambda\eta\text{-}\kappa\alpha$: $\tau\lambda\acute{\alpha}\omega$ 'endure'. Undoubtedly, in spite of the absence of points of contact in meaning, the fact that both stems ended in $-\lambda\eta\text{-}$ preceded by an explosive, was sufficient to cause the necessary association to change e.g. $*\tau\epsilon\text{-}\tau\lambda\eta\alpha$ to $\tau\acute{\epsilon}\text{-}\tau\lambda\eta\text{-}\kappa\alpha$ after $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$, always bearing in mind that an accidental product of such contamination would be eagerly perpetuated because of the avoidance of the awkward forms with hiatus. After $\tau\acute{\epsilon}\text{-}\tau\lambda\eta\text{-}\kappa\alpha$ its synonym $\tau\epsilon\text{-}\theta\acute{\alpha}\rho\sigma\eta\text{-}\kappa\alpha$: $\theta\alpha\rho\sigma\acute{\epsilon}\omega$ 'have courage, dare' received its κ . Together $\tau\acute{\epsilon}\tau\lambda\eta\kappa\alpha$ and $\tau\epsilon\theta\acute{\alpha}\rho\sigma\eta\kappa\alpha$ gave their κ to $\delta\acute{\epsilon}\text{-}\delta\omicron\iota\text{-}\kappa\alpha$ 'fear',⁹ their semantic opposite, while the latter gave its κ to the congeneric $\upsilon\pi\epsilon\mu\nu\eta\mu\upsilon\text{-}\kappa\epsilon$ 'hangs his head down, is utterly cast down', not however without the help of the formal association with $\mu\acute{\epsilon}\text{-}\mu\nu\text{-}\kappa\epsilon$: $\mu\acute{\upsilon}\omega$ (see below).

After $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$, $\tau\acute{\epsilon}\text{-}\tau\lambda\eta\text{-}\kappa\alpha$, and $\tau\epsilon\text{-}\theta\acute{\alpha}\rho\sigma\eta\text{-}\kappa\alpha$ were formed in addition to $\xi\eta\kappa\text{-}\alpha$ and $\xi\text{-}\theta\eta\kappa\text{-}\alpha$, there existed a nucleus of words in $-\eta\kappa\alpha$, whether perfects or aorists, which were of importance in causing the further spread of κ to perfects of other verb stems in η , although not without the assistance of semantic associations. Particularly closely associated on the one hand were $\tau\acute{\epsilon}\text{-}\theta\nu\eta\text{-}\kappa\alpha$ and $\kappa\acute{\epsilon}\text{-}\kappa\mu\eta\text{-}\kappa\alpha$ with $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$ and $\tau\acute{\epsilon}\text{-}\tau\lambda\eta\text{-}\kappa\alpha$, because of the obvious similarity of the treatment of the verb stem in these liquid and nasal verbs. On the other hand $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$ is close formally to $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$, the latter differing only by the absence of the λ , and thus undoubtedly being subject to the influence of the former. More remotely connected are $\xi\text{-}\sigma\tau\eta\text{-}\kappa\alpha$ (cf. $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$), $\beta\epsilon\text{-}\beta\iota\eta\text{-}\kappa\alpha$, and $\Upsilon\lambda\eta\text{-}\kappa\alpha$,¹⁰ in case of which semantic association played the main rôle.

Taking up the individual forms cited, $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$, as mentioned, on the one hand owes its κ to its similarity to $\beta\acute{\epsilon}\beta\lambda\eta\text{-}\kappa\alpha$, for $\beta\acute{\epsilon}\beta\lambda\eta\kappa\alpha$: $\beta\acute{\epsilon}\beta\eta\kappa\alpha$ = $\beta\acute{\epsilon}\beta\lambda\alpha\mu\epsilon\nu$: $\beta\acute{\epsilon}\beta\alpha\mu\epsilon\nu$. On the other hand its meaning connects it with $\xi\eta\kappa\alpha$ directly, since $\imath\eta\mu\iota$, or rather its compound $\acute{\epsilon}\varphi\text{-}\imath\eta\mu\iota$, is sometimes used to denote the sending of a person, e.g. Ω 117 $\imath\text{Ῑ}\rho\iota\nu$ $\acute{\epsilon}\varphi\acute{\eta}\sigma\omega$ 'I shall send Iris'. Contrasts between the sender and the person sent must have been common enough to account for the association of the two forms. After $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$ 'am gone' its semantic opposite $\xi\text{-}\sigma\tau\eta\text{-}\kappa\alpha$ 'have stopped, am standing still' was in turn captured by the κ -Perfect, all the more easily because both ended in $-\eta\kappa\alpha$ and were strictly rhyme words of three syllables each. Again this same $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$

⁹ Probably also its synonym $\xi\text{-}\pi\tau\eta\kappa\text{-}\alpha$, as seen below, was of some influence.

¹⁰ It is very doubtful whether a perfect $\Upsilon\lambda\eta\kappa\alpha$ existed at all. See p. 273.

must be held responsible for the κ of its synonyms $\mu\acute{\epsilon}\text{-}\mu\beta\lambda\omega\text{-}\kappa\alpha$: $\beta\lambda\acute{\omega}\sigma\kappa\omega$ 'go' and $\mu\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$: $\mu\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$ 'am gone'.

Another line of influence of $\beta\acute{\epsilon}\beta\eta\kappa\alpha$ is suggested by its meaning 'am gone' in the sense of 'am dead', corresponding to the use of the plural $\beta\epsilon\beta\acute{\alpha}\alpha\sigma\iota$, e.g. in Aesch., *Pers.* 1002 $\beta\epsilon\beta\acute{\alpha}\alpha\sigma\iota$ γὰρ τοίπερ ἀκρῶται στρατοῦ. That this use is as early as Homer is suggested by its application to the passing of time B 134 ἐννέα δὴ βεβᾶσι . . . ἐνιαυτοὶ 'nine years are gone'. In this sense, then, $\beta\acute{\epsilon}\beta\eta\kappa\alpha$, probably also the synonymous $\mu\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$ and $\mu\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$, were synonyms of $\tau\acute{\epsilon}\theta\eta\eta\kappa\alpha$ 'am dead', and were a factor in giving its κ to the latter, although the formal connection with $\beta\acute{\epsilon}\beta\eta\kappa\alpha$ and $\tau\acute{\epsilon}\lambda\eta\kappa\alpha$, as shown above, may have been the principal influence. 'To be dead' is in turn associated with 'be weary or sick', so that $\kappa\acute{\epsilon}\kappa\mu\eta\kappa\alpha$, in addition to its formal association with $\tau\acute{\epsilon}\theta\eta\eta\kappa\alpha$ and others mentioned, has a semantic bond with the latter even if we assume that the perfect $\kappa\acute{\epsilon}\kappa\mu\eta\kappa\alpha$ did not yet mean 'am dead' as it did later, and as we would expect also for Homer from the use of the aorist in this sense (cf. Γ 278 οἱ . . . καμόντας ἀνθρώπους τίνυσθον).

The perfects $\beta\acute{\epsilon}\text{-}\beta\eta\text{-}\kappa\alpha$ 'have gone and so am there' and $\xi\text{-}\sigma\tau\eta\text{-}\kappa\alpha$ 'have taken my stand and therefore stand' and their pluperfects are often practically equivalent to 'to be'. The latter e.g. in η 89 σταθμοὶ δ' ἀργύρεοι ἐν χαλκῷ ἕστασαν οὐδ' ὧ 'silver door posts stood (or 'were') on the bronze threshold'. The former e.g. in Soph. Ant. 67 τοῖς ἐν τέλει βεβῶσι πείσομαι 'I shall obey those who have stepped into and therefore are in power'. In Homer Z 495 οἰκόνδε βεβήκει 'she had gone home (and was then there)' is at least far on the way to the same meaning. Both of these perfects are in this sense also synonyms of $\pi\acute{\epsilon}\text{-}\phi\upsilon\text{-}\kappa\alpha$ 'have grown or become and therefore am'. It is therefore reasonable to assume that an older $*\pi\acute{\epsilon}\text{-}\phi\upsilon\text{-}\alpha$ was changed to $\pi\acute{\epsilon}\text{-}\phi\upsilon\text{-}\kappa\alpha$ under the influence of $\beta\acute{\epsilon}\beta\eta\kappa\alpha$ and $\xi\text{-}\sigma\tau\eta\text{-}\kappa\alpha$. Another synonym was the perfect $\tau\epsilon\text{-}\tau\acute{\upsilon}\chi\eta\text{-}\kappa\alpha$: $\tau\upsilon\gamma\chi\acute{\alpha}\nu\omega$ 'hit upon, light upon', which similarly was equivalent to 'to be' e.g. in κ 88 δὲν πέρι πέτρῃ ἡλίβατος τετύχηκε 'around which there is a precipitous rock'. This perfect also therefore received its κ from $\beta\acute{\epsilon}\beta\eta\kappa\alpha$, $\xi\sigma\tau\eta\kappa\alpha$, or $\pi\acute{\epsilon}\phi\upsilon\kappa\alpha$, or else from any two, or all three.

A peculiar position is occupied by $\beta\epsilon\text{-}\beta\iota\text{-}\kappa\alpha$: $\beta\iota\acute{\omega}$ 'do violence to', inasmuch as there is no association with any particular form in $-\kappa\alpha$ which stands out strongly enough to justify saying it was this word and no other which gave it its κ , and yet there are three connected perfects of which one, more probably more than one, brought the κ to the form. The Homeric examples are: ἄχος βεβίηκεν Ἀχαιοὺς K 145,

Π 22 and *χρειὼ βεβίηκεν Ἀχαιοὺς* K 172 'grief (need) has overcome the Achaeans'. It is therefore close in meaning to the compound *κατα-βέβληκα* : *κατα-βάλλω* 'throw down', which may suggest the idea of overcoming, as in Alcaeus : *κάβαλλε τὸν χειμῶνα* (a) 'throw down winter'. It may well be that this connection by itself was not strong enough to bring the κ to *βεβίηκα*, but it was assisted by a formal association between both *βέβηκα* and *βέβληκα* with *βεβίηκα*, and the three connections thus did what none could have done by itself.

Also complex were the associations which gave rise to *δέδῶ-κα* : *δύω* 'enter' in E 811 *κάματος . . . γυῖα δέδῶκεν* 'weariness has entered your limbs (and is there).¹¹ Possibly this semantic contact with perfects meaning 'be', sc. *πέφῶκα*, *τετύχηκα*, *βέβηκα*, *ἔστηκα*, had some influence in the formation of *δέδῶκα*, and, still more remotely, there may have been a connection with *βεβίηκα* 'have overcome', since entering of weariness was equivalent to overcoming the limbs. However, these influences could only have been secondary. The most potent factor was the formal connection between *πέφῶ-κα* and *δέδῶ-κα*, which by itself was easily strong enough to cause the κ to spread from the former to the latter. As an evidence of close formal association can be mentioned the two aorists *ἔφῶ-ν* and *ἔδῶ-ν*, the only two of this type in the Greek language. Together *πέφῶκα* and *δέδῶκα* then in turn brought their κ to the formally similar *μέμῶ-κα* : *μύω*, found in Ω 420 *σὺν δ' ἔλκεα πάντα μέμυκεν* 'all the wounds are closed together'.

For Homeric κ -Perfects in case of which associations with the simple *ἔηκα* or with earlier perfects in *-κα* are hard to find, the prepositional compounds of *ἔηκα*¹² gave a foothold. The aorist *ξυν-έηκα* often meant 'heard, took to heart, understood', e.g. O 442 *ὥς φάθ', ὃ δὲ ξυνέηκε*. In this sense it is a partial synonym of the aorist *ἐδάην* 'learned', the perfect of which, *δε-δάη-κα*, meaning 'to know' as a result of having learned, is still closer, and received its κ from *ξυν-έ-ηκ-α*. Cf. θ 134 *εἰ τιν' ἄεθλον οἶδέ τε καὶ δεδάηκε* 'whether he knows or understands some athletic contest'.

The compound *καθ-ίημι* 'send down' is used of eating and drinking, also in the aorist *καθ-έ-ηκ-α*, e.g. Ω 642 *οἶνον λαυκανίης καθέηκα* 'I sent

¹¹ In spite of Brugmann-Thumb 551, it is difficult to interpret this perfect in any other way than as a very early example of the 'resultative' perfect, which designates a resulting state, not of the subject, but of the object of a verb. It was particularly easy for this nuance to develop when the subject was abstract.

¹² Similarly, the compounds *ἐφ-έηκα* and *κατα-βέβληκα* were quoted above for their influence in the spread of the κ -Perfect.

wine down my throat, drank wine'. It is thus congeneric to $\beta\acute{\epsilon}\beta\rho\omega\kappa\alpha$: $\beta\iota\beta\rho\acute{\omega}\sigma\kappa\omega$ 'eat', and is one of the words to account for the κ of the latter,¹³ which is found in the perfect e.g. X 94 $\beta\epsilon\beta\rho\omega\kappa\acute{\omega}\varsigma \kappa\alpha\kappa\acute{\alpha} \varphi\acute{\alpha}\rho\mu\alpha\kappa(\alpha)$. On the other hand $\beta\acute{\epsilon}\beta\rho\omega\kappa\alpha$ ends like the aorist $\acute{\epsilon}\delta\omega\kappa\alpha$: $\delta\iota\delta\omega\mu\iota$ 'give', and it is probable that the latter also through formal association contributed to the former, as it also may have to $\acute{\mu}\acute{\epsilon}\mu\beta\lambda\omega\kappa\alpha$, cited above as influenced primarily by $\beta\acute{\epsilon}\beta\eta\kappa\alpha$. After $\beta\acute{\epsilon}\beta\rho\omega\kappa\alpha$ had been formed, it was in turn the source of the κ of its synonym $\delta\epsilon\delta\epsilon\iota\pi\nu\eta\kappa\alpha$: $\delta\epsilon\iota\pi\nu\acute{\epsilon}\omega$ 'dine', which is found ρ 359 in the pluperfect $\delta\epsilon\delta\epsilon\iota\pi\nu\acute{\eta}\kappa\epsilon\iota\nu$. The participle of either $\beta\acute{\epsilon}\beta\rho\omega\kappa\alpha$ or $\delta\epsilon\delta\epsilon\iota\pi\nu\eta\kappa\alpha$ or of both must be held responsible for the κ of $\acute{\alpha}\delta\eta\kappa\acute{o}\tau\epsilon\varsigma$ 'sated', which, although used to refer to toil and sleep in its Homeric occurrences (e.g. μ 281 $\kappa\alpha\mu\acute{\alpha}\tau\omega \acute{\alpha}\delta\eta\kappa\acute{o}\tau\alpha\varsigma \acute{\eta}\delta\acute{\epsilon} \kappa\alpha\iota \upsilon\pi\nu\acute{\omega}$ 'sated [i.e. overcome] with toil and sleep'), must have originally referred to the satiety of eating.

This completes the twenty-one Homeric κ -Perfects with the exception of the subjunctive $\iota\lambda\acute{\eta}\kappa\eta\sigma\iota$ in φ 365 $\epsilon\acute{\iota} \kappa\epsilon\nu \text{'}\acute{\Lambda}\rho\acute{o}\lambda\lambda\omega\nu \acute{\eta}\mu\acute{\iota}\nu \iota\lambda\acute{\eta}\kappa\eta\sigma\iota$ 'if Apollo will be propitious to us'. If this is really a perfect to the imperative $\iota\lambda\eta\theta\iota$ 'be propitious', the above mentioned $\xi\nu\nu\acute{\epsilon}\eta\kappa\alpha$ in the sense 'listen, attend to' is to be held responsible for the κ , for 'to listen to' and 'to be gracious to' were ideas that were constantly occurring side by side in prayer and supplication, and represented merely two stages in the acceptance of a prayer. It is not impossible, however, that those are right who consider both $\iota\lambda\acute{\eta}\kappa\eta\sigma\iota$ and the later optative $\iota\lambda\acute{\eta}\kappa\omicron\iota\varsigma$ as present formations.

So far only the aorists $\acute{\epsilon}\eta\kappa\alpha$, $\acute{\epsilon}\theta\eta\kappa\alpha$, and $\acute{\epsilon}\delta\omega\kappa\alpha$ have been considered as possible patterns for the κ -Perfect, but it is in itself equally plausible that old perfects in $\kappa\alpha$, in which the κ belonged to the entire verb system, were patterns for some of the κ -Perfects. An attempt, however, to find second perfects of verb stems in κ which could be associated with Homeric κ -Perfects fails to find a number of convincing and close connections, although there are a few which may well have played a subordinate part. Thus there is semantic similarity between $\delta\acute{\epsilon}\delta\omicron\rho\kappa\alpha$: $\delta\acute{\epsilon}\rho\kappa\omicron\mu\alpha\iota$ 'see' and $\delta\epsilon\delta\acute{\alpha}\eta\kappa\alpha$ 'have learned, know', and the former may well have aided $\xi\nu\nu\acute{\epsilon}\eta\kappa\alpha$ in the forming of the

¹³ If Doric $\acute{\epsilon}\omega\kappa\alpha$, as the old vowel gradation makes plausible, was the general Greek perfect of $\iota\eta\mu\iota$, it was largely responsible for the old perfects ending in $\omega\kappa\alpha$, and must have assisted very materially the aorist $\acute{\epsilon}\eta\kappa\alpha$ in causing the general spread of the κ . Nevertheless, even then, it would not be possible to get along without assuming the influence of $\acute{\epsilon}\eta\kappa\alpha$ altogether, for the confining of Homeric κ -Perfects to the singular necessarily points to aorist patterns.

latter. Or $\xi\pi\tau\eta\kappa\text{-}\alpha$: $\pi\tau\acute{\eta}\sigma\sigma\omega$ 'crouch, fear' may have given the κ to the synonym $\delta\acute{\epsilon}\text{-}\delta\omicron\iota\kappa\text{-}\alpha$,¹⁴ or at least have assisted the semantic opposite $\tau\epsilon\theta\acute{\alpha}\rho\sigma\eta\text{-}\kappa\alpha$, which was considered the main inducing form above. Furthermore, in the formation of $\pi\acute{\epsilon}\text{-}\varphi\bar{\upsilon}\text{-}\kappa\alpha$ 'have become, have been borne, exist' two second perfects from κ verbs may have assisted. On the one hand the association between mother and child may have caused sufficient connection between $\tau\acute{\epsilon}\text{-}\tau\omicron\kappa\text{-}\epsilon$ ¹⁵ ($\tau\acute{\iota}\text{-}\kappa\tau\text{-}\omega$) 'has borne, is mother' and $\pi\acute{\epsilon}\text{-}\varphi\bar{\upsilon}\text{-}\kappa\epsilon$ 'is born, is child' to make possible that the former helped give the κ to the latter. On the other hand $\xi\text{-}\omicron\iota\kappa\text{-}\alpha$ 'seem' is easily contrasted with $\pi\acute{\epsilon}\text{-}\varphi\bar{\upsilon}\text{-}\kappa\alpha$ 'am', and may have been a further influence in giving the latter its κ . The only reason for assigning to $\xi\eta\kappa\alpha$ and its compounds a more active part than to the perfects in $\text{-}\kappa\alpha$ is the total absence of satisfactory formal associations to assist the semantic connections mentioned. On the principle, however, of the summation of stimuli or the complication of causes,¹⁶ these connections probably assisted those with $\xi\text{-}\eta\kappa\text{-}\alpha$ and its compounds when those with the latter were too loose to cause the spread of the κ without assistance.

In the entire discussion above it has been assumed without comment that associations between aorists like $\xi\text{-}\eta\kappa\text{-}\alpha$ and perfects like $\beta\acute{\epsilon}\text{-}\beta\lambda\eta\text{-}\kappa\alpha$ were strong enough to cause the transfer of the κ to the latter. Such an association, however, is also assumed by others who are generally disposed to take different views of the processes of word formation, e.g. by Hirt, *Handbuch*² 576 f., who asserts that the paradigm $*\xi\sigma\tau\bar{\alpha}$: $\xi\sigma\tau\alpha\mu\epsilon\nu$ and the like were changed to $\xi\sigma\tau\bar{\alpha}\kappa\alpha$ after the aorists of the type $\xi\theta\eta\kappa\alpha$: $\xi\theta\epsilon\mu\epsilon\nu$. That such an association between perfects and aorists in general existed from early times, is shown by the mutual influence of endings, resulting in $\text{-}\alpha$, $\text{-}\alpha\varsigma$, $\text{-}\epsilon$ for the three persons of the singular in both tenses. That there was such an association between the Homeric κ -Perfects particularly and the aorists of the type $\xi\eta\kappa\alpha$, is proved by the fact mentioned by Hirt, loc. cit., that the Homeric perfects, like their aorist patterns, show the κ primarily in the singular. The association of perfects and aorists must therefore be considered as a fact, whatever explanation we may find. To me it would be an evi-

¹⁴ It is possible, because of $\delta\epsilon\iota\delta\acute{\iota}\xi\omicron\mu\alpha\iota < *δ\epsilon\text{-}\delta\acute{\iota}\phi\iota\kappa\text{-}\sigma\omicron\mu\alpha\iota$, (see Brugmann-Thumb 377), that $\delta\acute{\epsilon}\text{-}\delta\omicron\iota\kappa\alpha$ was not a κ -Perfect at all, and that the κ belonged to the root. In this case it was itself one of the patterns of the κ -Perfect.

¹⁵ Although this perfect occurs for the first time in Hesiod, *Op.* 591, in the participle $\tau\epsilon\tau\omicron\kappa\upsilon\lambda\eta\varsigma$, its vowel gradation marks it as old.

¹⁶ Cf. e.g. Wundt, *Sprachpsych.*³ 1. 402 et al.

dence that the question asked in Brugmann's *Grundriss* 2. 3.² 776 f., whether Greek in prehistoric times knew the historical perfect and lost the use later, must be answered in the affirmative, for the relation between the forms of the two tenses is explained most satisfactorily if partial identity of meaning gave a foothold for such a connection. Whatever its origin, this association of κ with perfect use was probably facilitated by perfects like $\delta\acute{\epsilon}\text{-}\delta\omicron\rho\kappa\text{-}\alpha$ and $\xi\text{-}\pi\tau\eta\kappa\text{-}\alpha$, in as far as these were patterns for κ -Perfects, and thus established some κ -forms which were intimately connected with perfect meaning from the beginning. Finally, it might be asked, since the principal part in the genesis of the κ -Perfect was played, not by $\xi\text{-}\delta\omega\kappa\text{-}\alpha$ or $\xi\text{-}\theta\eta\kappa\text{-}\alpha$, but by $\xi\eta\kappa\alpha$, and since this may have been a perfect in addition to having been an aorist (* $\acute{\chi}\text{-}\acute{\chi}\eta\kappa\text{-}\alpha$ as well as * $\acute{\epsilon}\text{-}\acute{\chi}\eta\kappa\text{-}\alpha$ would have yielded $\xi\eta\kappa\alpha$),¹⁷ whether it was not rather true that the prehistoric perfect $\xi\eta\kappa\alpha$ (or $\xi\omega\kappa\alpha$) also played an important part in the spread of the κ of the Perfect.

Every detail above has been based on Homeric Greek only, although it is clear that the beginnings of the κ -Perfect antedate the dialects, since all Greek dialects have the form, and it cannot well have originated independently in so many different localities. However, it could only have been a mere beginning, which developed differently in the various dialects. Pre-Hellenic must have been $\beta\acute{\epsilon}\beta\lambda\eta\kappa\alpha$, established as the earliest and most potent form above. It had original \bar{e} ¹⁸ instead of \bar{a} , so that the formal associations mentioned above hold good for all dialects. On the other hand it may be questioned whether an association between $\beta\acute{\epsilon}\beta\lambda\eta\kappa\alpha$ and Doric, Aeolic $\tau\acute{\epsilon}\tau\lambda\bar{a}\kappa\alpha$, $\beta\acute{\epsilon}\beta\bar{a}\kappa\alpha$, and $\xi\sigma\tau\bar{a}\kappa\alpha$ could be formed on the basis of form alone, although in some cases the formal connections were not needed, because the semantic associations were easily strong enough to work unassisted. That no more than a mere beginning of the κ -Perfect was pre-Hellenic is proved by the complex network of associations which connects the twenty-one Homeric examples. Such a stage clearly belongs to a time when the formation first began to spread, and this stage must have been different in different dialects, particularly in Doric and Aeolic, so

¹⁷ It is of course impossible to do more than speculate whether the Doric perfect $\text{-}\xi\omega\kappa\text{-}\alpha$, as suggested above, was in existence in other Greek dialects also, or whether pre-Hellenic * $\acute{\chi}\text{-}\acute{\chi}\omega\kappa\text{-}\alpha$ had become * $\acute{\chi}\text{-}\acute{\chi}\eta\kappa\text{-}\alpha$ through the influence of the aorist * $\acute{\epsilon}\text{-}\acute{\chi}\eta\kappa\text{-}\alpha$. At any rate there is no particular reason for believing that Attic $\epsilon\iota\kappa\alpha < * \acute{\epsilon}\text{-}\epsilon\kappa\text{-}\alpha$, with the root vowel of the middle $\epsilon\iota\mu\alpha\iota < * \acute{\epsilon}\text{-}\epsilon\text{-}\mu\alpha\iota$, existed in the Homeric language.

¹⁸ Cf. Boisacq, *Dict. etym. de la lang. grecque* s. v. $\beta\acute{\alpha}\lambda\lambda\omega$.

that, if the dialects were equally well represented at the age of Homer, we would find that the earliest κ -Perfects were formed from a largely different set of verbs.

On the basis, then, of the Homeric κ -Perfects¹⁹ and their intricate formal and semantic connections with aorists and simple perfects ending in $-\kappa\alpha$ and with each other, we may answer the questions asked above as follows: $\xi\eta\kappa\alpha$, $\eta\kappa\alpha$, possibly perfect as well as aorist, has been the main factor in the genesis of the κ -Perfect. It has been assisted, practically not at all by $\xi\theta\eta\kappa\alpha$, and only slightly by $\xi\delta\omega\kappa\alpha$. On the other hand, a number of Homeric perfects from verbs with κ as root-final, sc. $\delta\acute{\epsilon}\delta\omicron\rho\kappa\alpha$, $\xi\pi\tau\eta\kappa\alpha$, $\tau\acute{\epsilon}\tau\omicron\kappa\alpha$,²⁰ and $\xi\omicron\iota\kappa\alpha$, also seem to have played a part, although a subordinate part, in the spread of the formation, one in no way comparable to that of $\xi\eta\kappa\alpha$. The fact that all Homeric κ -Perfects are closely associated either with their patterns or among themselves, is evidence that the early growth of the formation took place, not through the conscious abstraction of $-\kappa\alpha$ as a perfect-forming suffix, but rather through irradiation or contamination of word endings.

¹⁹ That the Homeric language may not have been an absolutely complete mirror of the spoken language at its basis, is self-evident. It may well be also that if we had extant certain forms that are accidentally not preserved in Homer, we might have to revise our conclusions as to the stages in the spread of the κ -Perfect in some details. However, this would mean rather that the exposition given of the various associative connections operative in the spread of the formation was incomplete rather than false. The main outlines of the process could scarcely have been given wrongly.

²⁰ See note 15.

THE PREFIX *m-* WITH CERTAIN SUBSTANTIVES IN TIBETAN

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The origin and signification of the prefixes of Tibetan have in the past been the centres of a variety of theories, and among them *m-* has naturally excited speculation. The light thrown upon the matter by the native grammarians does not seem to greatly clarify the issue, although in the case of *m-* their main statement has, perhaps, a significance so far unnoticed. The object of this note, accordingly, is to bring out this fact, and to illumine the origin of at least some of the substantives in *m-*. To this end let us first examine the main contention of the Tibetan grammarians with regard to this prefix.

In Žalupa's *Zamatog* it is stated¹ that *the very feminine prefix (m-) serves to indicate an invariable state* (šin-tu mo ni mñam p'yir-ro).

From this Laufer² has concluded that the allusion is to the inability of *m-* verbs to change their form with change of tense, as in whatever time connexion they occur they remain the same (mñam) as far as their prefix is concerned.

On other grounds, however, it is not improbable that the statement may refer rather to the unchanging state or condition predicated by *m-* verbs; or, that as these verbs are normally inactive intransitive and simply name an act or state which they attribute to a subject that naturally remains passive and the same (mñam-pa), the statement may have reference to this fact.

The full proof of this cannot be adduced here as the matter also involves all the other prefixes, but suffice it to say that such forms as mña-ba *to be*, mk'yen-pa *to know*, mgu-ba *to be glad*, are normal for verbs in *m-*, while active transitive senses carry other prefixes.

¹ See Laufer, 'Studien zur Sprachwissenschaft der Tibeter,' *Sitzungsber. d. philosoph.-philolog. u. hist. Classe d. k. b. Akad. d. Wissensch. zu München* 1898. 542-3, and compare Si-tu-i sum-rtags 56, as reprinted by Sarat Chandra Das in his *Introduction to the Grammar of the Tibetan Language* (Darjeeling, 1915).

² Op. cit. 543.

It is not then surprising to find many *m*- forms in the closely allied sense of substantives, certain selected instances of which among those indicating parts of the human body and family relationships will be discussed here, as the etymology of these, so far as the writer is aware, has so far escaped attention.

1. *mk'rig-ma* *wrist* (i.e. *joint*). Belonging with this are *āk'rig-pa* *to cohere, to stick together*; *āgrig-pa* *to be or belong together*; *sgrig-pa*, Perf. *bsgrigs*, Fut. *bsgrig*, Imp. *sgrig(s)* *to put, lay, or fit together, to join* (as the separate parts of an animal body).³

2. *mgal* *jaw, jaw-bone*, lit. (*the parts*) *opposed*. This root appears also in *āgal-ba* *to be opposed or in opposition, to be contradictory*; *rgol-ba*, Perf. and Fut. *brgol* *to dispute, to combat, to fight*; *rkal-ba*⁴ (?), Perf. *brkal* *to quarrel, to accuse*. Also, without prefix, *gal-ba* *to force or press something upon a person, gal constraint, compulsion*.

3. *mñal* *womb* (as the *resting place of the inert, torpid foetus*). Cognates here are *bsñal-ba* *to be faint, to be exhausted*; and, without prefix, *ñal-ba* *to be fatigued, tired, or wearied; fatigue, weariness*, probably also *listless, torpid, still*, meanings verging towards the possible basic sense of *mñal*.

4. *mdzug-gu* (also *mdzub-mo*) *finger, toe, claw* (probably *small piece* [diminutive *-u*] *set on or in*), and possibly *mjug* *hind part; posteriors, back-side; end; tail*. Belonging here are *ājūg-pa* *to be combined with, to have added to* (as prefixed or suffixed letters); *ādzugs-pa*, *zug-pa*, Perf. *btsugs*, *zugs*, Fut. *gzugs*, Imp. *zug(s)* *to set out plants* (by sticking them into the ground), *to erect* (a pillar). The basic sense of this group is probably one of *insertion* (to set in) as much as *addition* (to put on), and *mdzug-gu* would then be *a piece set in, added in a socket*. This view is supported by many of the significations of *ādzugs-pa* such as *to prick or stick into, to pierce, to thrust in, to sting*; of *ājūg-pa*, Perf. *bčug*, Fut. *gžug*, Imp. *č'ug* *to insert, to infuse, to inject*; of *āt'sugs-pa*, Perf. *t'sugs* *to go into, to penetrate, to take root in*, and their variants in final *-d*. There is little doubt that the form *mdzub-mo* is secondary.

³ Jäschke, *Tibetan-English Dictionary* 120, s. v. *sgrig-pa*.

⁴ Questionable as a Present form. Schroeter (*Dictionary of the Bhotanta or Boutan Language* 321) gives *rgal-ba* *a dispute*, a sense not listed by Jäschke, but does not record *rkal-ba*. From Jäschke's *Tibetan-English Dictionary* and the *Dictionary Tibetan and English* of Csoma de Kőrös the form is also lacking. Schmidt's *Tibetisch-Deutsches Wörterbuch* the writer has had no opportunity to consult. The Perfect occurs in the *Dzanglun*: *č'en-ma k'yod-kyis ña-i bu bsad-dō žes brkal-to* *She accused the first wife (saying) 'You have killed my son.'* See Schmidt, *Grammatik der tibetischen Sprache* 222.

5. *mdun-ma wife (conjunct; she with whom one is united)*. To this are related *sdud-pa*, Perf. *bsdus*, Fut. *bsdü*, Imp. *sdud*, *bsdü* *to put together, to join, to unite* (others, e.g. *k'yo-šug-tu* *as husband and wife*), *to marry*; *adu-ba*, Perf. *adus* *to assemble, to come together, to meet, to unite or join one another* (e.g. *k'yo-šug-tu* *as husband and wife*), *to get married*; *adun-ma council, association, meeting, society*; *bride*; *dud-pa* *to tie, to knot*, *mdud-pa knot, bow, and others*.

6. *mt'san*⁵ *grandchild, nephew*. With this belong *btsa-ba*, Perf. *btsas* *to bear, to bring forth, to give birth to*; and, without prefix, *t'sa-bo grandchild, grandson*, *t'sa-mo granddaughter, niece*.

Laufer⁶ regards *m-* in such cases as these as a numerative, which indeed he considers to be one of the main purposes of prefixes with nouns. The matter, however, is capable of a different interpretation in at least those instances in which *m-* substantives occur as members of groups composed mainly of verbs, for such a form as *mk'rig-ma* has in fact a basic sense of *that which joins*, and similarly with the remaining cases. From this it follows that the prefix in such an instance probably belonged originally to a verb form of inactive intransitive sense which has lapsed into a substantival meaning and assumed the noun suffix *-ma*. Inactive intransitive verb forms in *m-* are numerous enough throughout the language to support this contention abundantly.

The validity of the theory that Tibetan ever used numeratives with its substantives in the ancient language is indeed open to doubt. The *m-* forms show far too widely sundered senses for the prefix to have ever functioned as an index of mental association. Among substantives alone we have, for instance, in *m-*, *mña* *might*, *mt'il* *bottom* (of a vessel or the sea), *mdaṅ*, *mdaṅs* *last evening*, *mna* *oath*, *mdzod* *store-house*, while among numerous adjectives are *mdzaṅs-pa* *wise*, *mk'o-ba* *desirable*, *mk'raṅ(-ba)* *hard*, *mñar-ba* *sweet*, *mggyogs-pa* *swift*. Verbs again, as already noted, are provided with this prefix, and give us among others *mnal-ba* *to sleep*, *mt'oṅ-ba* *to behold*, *mdza-ba* *to love*, *mnam-pa* *to smell* (vb. neut.), *to stink*, *mč'is-pa* *to be, to exist*.

It is true that we have *mi man* used in certain connexions as a species of numerative or classifier in *mi-rje* *king*, *mi-ña* *I*, but this is of very much younger origin than the old unvocalised prefixes of the language, and can be connected only with similar usages in the comparatively very recent dialects of Assam and Burma where, for instance, *Dīmā-sā*

⁵ Occurs in an early document from Chinese Turkestan. See Thomas, *JRAS* 1927. 74. *k'u-mt'san* *uncle(s)* and *nephew(s)* there appears for later *k'u-t'san*.

⁶ T'oung Pao 15. 109 (1914).

of the Bodo Group uses *sao* *body* in names of the human organs: *sao-gur* *skin*, *sao-mān* *limbs*, *sao-k'i-mi* *body hair*, and others; while *mi* *animal* is similarly employed in e.g. *mi-gur* *skin* (animal), *mi-groñ* *horn*, *mi-sip* *buffalo*, *mi-di* *porcupine*.

It may be that the ancient prefixed consonants of Tibetan were formerly vocalised⁷ (a contention indeed which probably has some basis in fact), and that consequently what is now a single consonantal prefix represents the fusion of several once differing forms, but the number of shades of vowel coloring which would have been necessary to provide the requisite variety among numeratives for them to ever function with any clarity is far too great to allow of our postulating their existence in the ancient language.

As against this, the conclusion to be drawn from the evidence in the case of the particular prefix under discussion is rather that when an *m*-form occurs as a member of a group largely made up of verbs, and such *m*-form is a substantive, we may anticipate its being a transfer from the verbal domain and the prefix as being a verbal element.

This is in exact agreement with those very frequent cases in which a verb functions also as a substantive.

Of this we have examples in *bde-ba* *to be happy*, also *happiness*, *bdog-pa* *to be possessed of*, also *wealth, riches*; *ajol-ba* *to hang down*, *to be pendant*, also *train, trail, retinue*; *mt'un-pa*, *at'un-pa* *to be in agreement*, also *agreement, harmony*; *mč'od-pa* *to honour, to hold in respect*, also *offering, oblation*, and others.

That *m*-forms with substantival meanings only may be transplanted verb forms here finds abundant support.

The exact nature and the force of the prefix *m*- still remain to be determined, but it is already evident that it is of a somewhat passive nature. Whatever the exact purport of their statements may be, it is clear that the native grammarians long ago recognized this. The normal *m*-verb in fact stands directly opposed in nature to the active transitive and so-called causative verb with a different prefix, to which in some cases it even stands as an opposing partner, just as Conrady⁸ many years ago (1896) observed of *ā*- and *s*-verbs. His suggestion, however, that *m*- and *ā*- may go back to one original form⁹ can hardly be defended.

⁷ This has more than once been suggested. See, for instance, Conrady, *Eine indochinesische Causativ-Denominativ-Bildung*, p. x, and again in the *Zeitschrift der deutschen Morgenländischen Gesellschaft* 51. 532-3 (1897).

⁸ *Causativ-Denominativ-Bildung* 20.

⁹ *Ibid.* 23.

BOOK REVIEWS

The Vedic Declension of the Type *vrkī's*; a contribution to the study of the feminine noun-declension in Indo-European. Johns Hopkins dissertation. Pp. 25. By RUTH NORTON ALBRIGHT. (LANGUAGE DISSERTATIONS Published by the LINGUISTIC SOCIETY OF AMERICA, No. 1.) Philadelphia: 1927.

Dr. Albright's thesis is that the *vrkīs*-declension originated in Indic speech from contamination of the *devī*-declension (*devī* 'goddess', acc. *devīm*, gen. *devyās*) and the declension of the compounds of root-nouns like *su-dhīs* 'having pious thoughts' (acc. *sudhiyam*, gen. *sudhiyas*). Her argument for the origin of the type in Indic rather than in Indo-European is based largely upon a detailed demonstration that a large proportion of the *vrkīs*-forms in the Veda are required by the meter. She holds that the poets, as a rule, preferred the original *devī*-declension, but occasionally employed the root-noun declension for metrical convenience. There are, to be sure, a number of contaminated forms, such as the nominative *vrkīs* 'she-wolf' itself, which were employed without metrical inducement; but, Dr. Albright thinks, these were not numerous enough to constitute a separate inflectional type, and so the incipient *vrkīs*-declension disappeared with the Vedic meters.

The argument is worked through with admirable care and acumen, and scholars will be grateful for this thorough sifting of the materials, whatever their opinion of the author's main conclusion. Dr. Albright has provided much of the foundation upon which any theory of these matters must rest.

Her argument, however, is scarcely conclusive. The sword of metrical convenience cuts both ways, as she herself points out in her brief discussion of the instrumental singular of the *ā*-stems. The original ending, according to current opinion, was *-ā* (e.g. Vedic *śravasyā*, inst. fem. from *śravasyas* 'swift'), but the analogy of the pronominal declension introduced the ending *ayā* (*śravasyayā*). Here the Vedic meter is said to have preserved a moribund form; and that may equally well be the case with the *vrkīs*-forms. The fact that these forms are protected by the meter leaves untouched the question whether the poets were, for metrical convenience, employing new analogical creations or retaining old inherited forms.

We must look to other criteria in order to decide whether or not IE possessed the *vrkīs*-declension. The evidence is not abundant, but there is some which Dr. Albright overlooked. In the first place, we may adopt a point of view that has recently been described rather impressively by Meillet:¹

Les formations d'ordinaux montrent, une fois de plus, que l'état de choses indo-européen ne se laisse restituer ou deviner qu'à travers les formes anormales, et que les dérivés normaux enseignent peu de choses sur la langue commune initiale: règle de méthode qu'on perd trop de vue.

The *vrkīs*-declension is almost confined to the Veda, and even there it is distinctly anomalous. There is, then, a certain antecedent probability that it is a survival rather than an analogical innovation; analogy usually tends toward the normal. A word like *nadī* 'stream', which shows the *vrkīs*-declension 55 times and the *devī*-declension 3 times in the Rig-Veda, but which in the later language goes always according to the *devī*-declension, is probably a remnant of Indo-European conditions, just because no other common word in the Rig-Veda regularly follows the *vrkīs*-declension.

Dr. Albright follows this principle in holding (21) that the isolated locatives *gaurī* (from *gaurī* 'female buffalo') and *sarasī* (from *sarasī* 'pool, lake') represent the original form of this case, whether their *ī* is analogous to the *ū* in locatives from *ū*-stems like *tanūs* 'body', or whether it results from stem-final *ī* + case-ending *ī*. She is surely correct in this and in the further inference that it was metrical convenience which protected these two forms from the analogy which yielded locative *dhīyī* from *dhīs* 'thought'.

One wonders why the *ū*-stems are mentioned nowhere else in the dissertation. Whitney treats them in the same paragraphs with the *ī*-stems, and the parallelism of the two is instructive. For the Vedic *tanūs*-declension (acc. *tanuam*, gen. *tanuas*) is certainly not a contamination of 'derivative' *ū*-stems with root-nouns. Instead, the classical *ū*-stems (*vadhūs* 'woman', acc. *vadhūm*, gen. *vadhvās*), as Whitney remarks (§362. 3), are transfers from the *tanūs*-declension under the influence of the *devī*-declension. Neither is there any doubt that the *tanūs*-declension is IE; Skt. *śvaśrūs* and Church Slavonic *svekry* 'mother-in-law' imply IE **syekrūs*, even if one refuse to admit the evidence of Lat. *socrus*, on account of the short stem-vowel. In Greek the type is represented by such words as *ὄφρῦς*, *ισχ'ῦς*, *πληθῦς*, *ἀχλῦς*, *ἐδητῦς*, *μνηστῦς*,

¹ *Bulletin de la Société de Linguistique de Paris* 29. 37 (1928).

etc. Now, if IE had a declension with nominative in *ūs* and genitive in *uos* we should expect to find also words with nominative in *īs* and genitive in *ios*.

There is also a little direct evidence for this type of declension in the IE languages outside of Skt. Homeric Greek preserves *ἥνις* 'yearling' (acc. *ἥνιν*, acc. pl. *ἥνις*) and *βλοσυρώπις* 'grim-faced'. More significant is the ordinary declension of the Gk. *i*-stems in most dialects (*πόλις*, *πόλιος*, *πόλι*, *πόλιν*, *πόλιες*, *πολίων*, *πόλισι*, *πόλιν*). The genitive and dative singular and nominative and genitive plural of this paradigm were certainly not inherited from the IE *ī*-declension, and it is difficult to see where they came from if not from the *vrkīs*-declension; there is no reason to suppose that Greek ever had root-nouns in *ī* aside from the defective *ἰς* 'strength', while a number of the *ω*-stems seem originally to have belonged to the *vrkīs*-declension.²

Latin has completely lost the *ū*-stem adjective declension, but several words which originally belonged to that declension appear as *ī*-stems; e.g. *suavis*: Gk. *ἡδύς*, Skt. *svādus* 'sweet'; *gravis*: Gk. *βαρύς*, Skt. *gurus* 'heavy'; *tenuis*: Skt. *tanus* 'thin'. It is usually assumed that the feminines (Skt. *svādvī*, *gurvī*, *tanvī*) played an important rôle in this transfer, and the process would be much easier if we should assume IE feminines such as **suādyīs*, **guryīs*, **tenyīs*, like Vedic *naptīs* 'granddaughter': *napāt* 'grandson'.

If, then, we carry the *vrkīs*-declension back to the parent speech, it is still possible to suppose that it arose there in some such way as Dr. Albright suggests for a later period. It is, however, more likely that the prehistoric development was in the same direction as that which we can actually trace. In historic times the *vrkīs*-declension gives way to other types, principally the *devī*-declension (Skt. *nadī*), the *ā*-declension (Latin *lupa*), and the *ī*-declension (Latin *neptis*). Shifts of the third sort are found chiefly in languages which show extensive shortening in final syllables; but the other two processes are more fundamental.

I am inclined to agree with Collitz³ that the *ā*-stems were declined in IE much as they are in Skt. (*senā* 'army', gen *senāyās*). Brugmann's complicated explanation of this declension as due to the analogy of the *devī*-declension is not satisfactory. Furthermore, the *devī*-declension itself demands explanation. It cannot be ascribed to ablaut; for masculine or feminine nouns with ablaut show either full or lengthened grade in the nominative.

² See Brugmann-Thumb, *Griechische Grammatik* 214.

³ Bezenberger's *Beiträge zur Kunde der Indogermanischen Sprachen* 29. 81-114 (1905).

I suggest, therefore, that originally the feminine \bar{i} -stems and \bar{u} -stems were declined without ablaut, in about the same way as the root-nouns. The \bar{i} -stems early fell under the influence of the \bar{a} -stems (at that time $\bar{a}i$ -stems, according to Collitz's theory), thus:

$$*d\eta\bar{g}hy\bar{a}'i: *d\eta\bar{g}hy\bar{a}'i\bar{a}s = *dei\bar{y}\bar{a}'(s): *dei\bar{y}\bar{a}'\bar{a}s$$

The subsequent change of $*dei\bar{y}\bar{a}'\bar{a}s$ to Skt. *devyā's* is fully treated by Collitz (*op. cit.*). In Vedic times the process of assimilating the *vr̥k̥is*-declension to the *senā*-declension was in its last stages, and in Classical Skt. it was practically complete.

E. H. STURTEVANT

De Hollandsche expansie in de zestiende en zeventiende eeuw en haar weerspiegeling in de hedendaagsche Nederlandsche dialecten; Proeve eener historisch-dialectgeographische synthese. By DR. G. G. KLOEKE. (*Noord- en Zuid-Nederlandsche dialectbibliotheek*, onder leiding van Dr. L. Grootaers en Dr. G. G. Kloeke, Deel II). s'Gravenhage, Martinus Nijhoff, 1927.

Kloeke has carried out the enormous task of ascertaining, chiefly by field-work, partly by correspondence, the Dutch reflexes of West Germanic [u:] in the word *mouse* and, secondarily, in the word *house*. His data are given on a large-scale map (uniform with that in Number I of the series, *Handleiding bij het Noord- en Zuid-Nederlandsche dialectonderzoek*; cf. *Modern Philology* 25. 376). Very roughly, the distribution of the forms is as follows:

(1) The word *mouse* is pronounced [mu:s] in an eastern district adjoining Germany and extending westward to a line which varies between 23°10' and 23°40'. Within this general [mu:s] district, the form [my:s] is spoken in the Frisian towns (e.g., Dokkum, Leeuwarden, Sneek), in the district known as Het Bil(d)t¹, in a coastal patch on the Zuider-Zee (Workum, Hindeloopen to Genemuiden), in a large district extending south from the southeast coast of the Zuider-Zee (including Nijmegen and, in Germany, Cleves), and in a few isolated spots to the south. Within the [mu:s] district the pronunciation of *house* is, of course, generally [hu:s], but the form [hy:s] is spoken not only in the above districts of [my:s], but in a solid block bounded on the north by the line 54°,

¹ See te Winkel's map, Paul's *Grundriss* I² 924; apparently the district embraces in Kloeke's \dagger st (*Handleiding* 68) Sint-Jacobi-Parochie, Sint-Anna-Parochie, Oude-Biltzijl, Lieve-Frouwen-Parochie.

on the east by a line which varies between 24° 10' and 24° 20', and on the south by 51° 30', plus a few large patches to the north and east.

(2) Diphthongal forms, such as Standard Dutch [møys] are spoken in a great central district, which includes the urban centers of Holland and Belgium.

(3) The form [my:s] is spoken on the West Frisian islands, on the Zeeland islands, along the coast south of these latter, and throughout the territory west of the line 21° (including, e.g., Bruges). The extreme west (Dunkirk) speaks [mø:s].

By means of documents and the statements of early grammars Kloeke traces the older conditions. He controls this linguistic evidence by an independent study of the records of migration, commerce, politics, and religion. He combines skilful minute research with imaginative but realistic deduction. Stripped of details (many of which are interesting) the story runs thus:

West Germanic [u:] is preserved in modern Dutch in a number of homely or coarse words, such as *poes*, 'pussy', *poezelig* 'chubby', *snoet* 'snout, snoot' (120). These are ordinarily taken to be loan-words from [u:] dialects, but their familiar character makes it far more probable that they represent the oldest stratum of Dutch.

At some ancient time a cultural influence from the south spread the pronunciation of [y:] for [u:] (perhaps connected with the same phenomenon in French; see 195). It worked northward and covered all of Holland proper. The [y:] pronunciation (together with its modern successors) was thus in Dutch a linguistic loan; the above-mentioned words with [u:] represent the underlying native speech-form: 'We moeten dus aannemen, dat de *uu*-laag² . . . niet autochthoon is, en dat . . . een oorspronkelijke *oe*-laag door een *uu*-laag is overstroomd. Een bewijs daarvoor zie ik in het feit, dat in Holland (en in de andere gebieden waar de *uu* overheerscht heeft of nog heerscht) relicten met oude *oe* zich gehandhaaft hebben' (119). In the 16th and 17th centuries [y:] was still (as opposed to the present-day diphthong) the prevalent sound in Holland proper. Thus, [y:] is attested for Rotterdam as late as 1683 (and probably lasted well into the 18th century), Delft 1635, Leiden 1626 (mentioned as old-fashioned, 1683); Ghent had [y:] in the 16th century. In the great period of Hollandish expansion, then, [y:] was spoken. Wherever the commercial and cultural influence of the Holland cities went, the Holland pronunciation of [y:] for [u:] became the

² Here and below, *uu* is Dutch orthography for [y:], *oe* for [u:].

style. Either, as in the Bilt, there was actual immigration of upper-class Hollanders, or, as in the Frisian cities, the local upper class adopted the higher-toned form of speech from their contacts with the Holland upper class. Well-to-do and highly respected refugees carried the style into the German towns along the lower Rhine. The islands and maritime towns along the Zuider-Zee adopted the [y:]³. The Dutch loan-words in Javanese, Low German, and Russian are from the [y:] period; Russian distinguishes between Dutch words with West Germanic [iu] and [u:]. The Creole Dutch of the Virgin Islands has the monophthong.

This [y:] was the general Dutch standard; it was affected by everyone that made any claim to urbanity; gradually it was copied by wider and wider strata of the population, until today it has become the dialect form in the [my:s] districts above outlined, districts that lie in larger and smaller patches about the periphery of the great modern diphthongizing tract.

It is to be noted that [hy:s] is of wider and more coherent extent than [my:s]. The reason is evidently that the latter word was less common in intercourse with outsiders or with social superiors. In the large areas where one says [mu:s] but [hy:s] the former is the indigenous type, the latter a loan. Hyper-urban forms occur, e.g., *foot* pronounced as [fy:t] instead of [fu:t]: 'het is wel opmerkelijk, dat de *uu* voor elken Boerenfries met heerige allures nog altijd een deftiger cachet heeft dan de *oe*. Dat de *uu* eens beschaafd Hollandsch geweest moet zijn, weet niemand meer, maar de oude traditie van deftigheid is gebleven' (85).

Thus the peripheries of the 16th and 17th century Holland culture preserve today a speech-form which at the center no longer exists; the center has since then changed the long high vowels to diphthongs. Kloeke hints that English, Dutch, and German, which all diphthongize, have in common not only their Germanic heritage, but also the long influence of Romanic culture. It was probably in Brabant and Antwerp that the diphthongizing pronunciation first appeared on Dutch territory. At the end of the 16th century we find a northerner mocking the diphthongizing pronunciation of Antwerp (103). At the beginning of the 16th century Antwerp, with some 88,000 inhabitants, was the greatest Dutch city; Amsterdam numbered some 13,500. By the first quarter of the 17th century Amsterdam had the lead, with a population of 100,000. Doubtless it was the well-to-do citizens who left the declining southern cities for the flourishing northern; the diphthongs came

³ The old Hanseatic cities along the IJssel (Kampen, Deventer, Zutphen), as well as Zwolle, are excepted; these stood under North German cultural influence.

as an upper-class pronunciation. The native upper class took up the style; in time it was copied by ever wider strata. We may suppose that by the year 1600 the diphthongs had prevailed in Amsterdam. In the 17th century the poets (Breero, Vondel) already rhyme West Germanic [iu] with West Germanic [u:]. Today the diphthong, in one form or another, has conquered Holland. Hyper-forms exist, as *kluiven* 'peck, gnaw' for older *kluwen*⁴.

Kloeke's discussion is illuminating and as pioneer work in the field of Standard Language will stand beside the English studies of H. C. Wyld. One wishes that Kloeke paid more attention to the coincidence of phonemes and its reverse. The fact that West Germanic [snu:t] and [fo:t] are in Dutch spoken with the same vowel, the coincidence of West Germanic [iu] and [u:] in modern Dutch, or the coincidence, in the dialect of Schermerhorn (112) of the correspondents of modern Dutch *ui* and *eu*,—such points deserve more stress. The exact shading of sounds is far less important than the distribution of phonemes among words. That is why the divergence of *mouse* and *house* in large eastern areas of Kloeke's territory is so decisive for his argument. In linguistic history, and especially in matters of borrowing, it is the displacement of the system which is important.

Kloeke's theoretical deductions regarding standard speech and dialects are valuable. Dialects are not, in principle, more archaic than standard languages. They do, however, often preserve the standard forms of an older time; these have taken generations to seep down into the dialect and may meanwhile have been superseded in the standard speech. The notion that a central language acts as a kind of police, retarding change in the dialects, is the reverse of the truth. Dialect speakers imitate the upper-class speech; they do so until the indigenous character of the dialect remains in only a few homely forms.

All this, of course, explains many of the irregularities which often are cited against the postulate of change in phonemes. Kloeke's study is not only a very skilful application of the linguistic methods that were developed in the last century, but also one more confirmation of the correctness of these methods. Thus, from the irregular distribution of the phonemes Kloeke is able to deduce, convincingly, that borrowing must have occurred: 'Bij de principiele aanvaarding van *oe*-relieten kunnen we m. i. niet ontkomen aan de conclusie, dat ook de *uu*-uitspraak van buitenaf is geïmporteerd' (122). 'Zoo zal de lezer na bestudeering en

⁴ Normally, West Germanic [u:w] is Dutch [y:w], e.g., *gruwen*: German *grauen*; see te Winkel, Paul's *Grundriss* I² 825.

vergelijking der *muus*/*moes*- en *huus*/*hoes*-lijnen er opnieuw van door-drongen worden, dat de *oe* > *uu*-ontwikkeling niet op langzame phonetische verandering maar op ontleening berust' (191). Such deductions are valid, of course, only so long as we adhere to the postulate that sound-change is change of phonemes as such, and therefore not subject to deflection by semantic factors (frequency, homonymy, etc.). If we gave up this postulate, deductions like these of Kloeke's would lose all cogency; we could then say that Dutch *snoet* was simply excepted (say, by 'sound-symbolism') from a general change of [u:] to [y:], and that eastern Dutch [hy:s] versus [mu:s] represented not a cultural irradiation but 'sporadic sound-change' or what not.

It is surprising, therefore, and, as to Kloeke's reasoning, most confusing,—I have had to extricate his deductions,—when one finds him engaged in a polemic against the very principles on which his work is based. Thus, opposite the last-quoted important deduction we read (190): 'Ten spijt van klankwetten en verdere geboden der Junggrammatiker is hier⁵ een woord uit het geordend verband zijner klankgenooten getreden; immers men kan toch bezwaarlijk beweren, dat er ten aanzien van de phonetische praedispositie der woorden *hûs* en *mûs* eenig principieel verschil bestaat, en met verklaring volgens analogie is hier in 't geheel niets aan te vangen.' The answer is given by Kloeke himself on the next page. Similarly, in the introductory chapter, Kloeke confuses the whole issue by a polemic against the very men who taught us even to recognize linguistic borrowing. He recalls Paul's fumbings as to the degree of 'consciousness' of linguistic change.⁶ Fortunately, these statements remain purely extraneous and do not affect the methods and conclusions of this excellent book, which greatly furthers our knowledge of standard speech and its effect upon dialects.

L. BLOOMFIELD

⁵ He is referring to [hy:s] *house*, beside [mu:s] *mouse*.

⁶ One hazards the guess that Kloeke has allowed himself to be imposed upon by the sensationalism of writers who, finding Brugmann and Meyer-Lübke hard reading and desperately complete, set out to produce a 'deeper' and more 'spiritual' version of linguistics, with all the bothersome details replaced by 'intuition'. Kloeke has no need of this. Schuchardt, through a historical accident, stood aside from the theoretical formulations of his contemporaries. Gilliéron, in spite of much vigorous and pleasing metaphor, insists upon 'l'implacable régime de la phonétique' (*Généalogie des mots qui désignent l'abeille*, Paris, 1918, *Bibliothèque de l'École des Hautes Études*, No 225, p. 14; cf. also p. 261).

Les Langues Dans l'Europe Nouvelle. Second edition. Pp. xii + 495, with a linguistic map of Europe. By A. MEILLET. Avec un appendice de L. Tesnière, sur la statistique des langues de l'Europe. Paris: Payot, 1928.

The first edition of this work appeared in 1918, in the closing months of the World War, and showed a remarkable scientific detachment from national prejudices in the handling of disputable points. The new edition shows the alterations required by the new political boundaries and the creation of new states after the war, notably in the much altered chapters 3 and 4 (= chapter 1 of the first edition), 20 (= 20), 25 (= 17), 26 (= 18), 24, 27 and 28 (= 19.) Several new chapters have been added: 1, *L'époque préhistorique*; 2, *L'extension des langues indo-européennes*; 19, *La situation linguistique suivant les régions de l'Europe*; 21 *Origines de la situation linguistique dans l'Europe orientale*; 23, *La situation linguistique dans la bande centrale de l'Europe*; 29, *Les inconvénients des langues nationales*. The remaining 20 chapters differ from those of the first edition only in minor changes and additions.

Professor Meillet's sympathies are throughout in favor of the great languages because of their greater values to their speakers, both in material and in cultural aspects. He considers as unwise the attempt to make the University of Ghent a Flemish-speaking institution instead of French-speaking (151, 183); he looks upon the erection of Irish into a national language, against the use of English, as a handicap to the Irish Free State (182); he thinks the decentralizing linguistic policy of the Russian Soviets a destructive step (232-3). On the other hand, he considers the United States fortunate in having but one language (246), and envisages a perfected 'artificial' language, officially adopted as auxiliary language by a number of important governments, as the means which might give, 'au moins pour la vie matérielle, aux relations internationales, l'instrument pratique et simple qui leur manque' (279-85).

The volume is marked by many epigrammatic utterances which sum up much linguistic wisdom. One cannot refrain from quoting a few: 'L'anglais . . . est la seule langue mondiale' (28). 'Une langue ne vaut que si elle est l'organe d'une civilisation originale' (83). 'Il est rare que l'extension d'une langue provienne d'une contrainte' (115). 'Mais variété de vocabulaire ne signifie pas différence de langue. Une langue est définie par sa prononciation et sa grammaire' (127). In abandoning Latin, 'la science européenne a du coup perdu sa langue commune' (136). 'Les seules langues qui se fixent alors sont celles des

unités nationales qui étaient arrivées sinon à l'unité politique, du moins à la conscience de leur unité nationale, et qui à cette conscience joignent une civilisation propre' (162). 'Le culte du passé fait beaucoup pour maintenir l'unité des groupes, et, au-dessus des groupes divisés, pour établir de larges communautés de civilisation' (235). 'Avoir pour langue de culture une petite langue, c'est se condamner à apprendre plus ou moins une grande langue' (260). 'En l'état actuel du monde, un civilisé doit être maître au moins du français, de l'allemand et de l'anglais' (260). 'Pour apprendre à bien connaître les ressources de sa propre langue et pour en pénétrer l'esprit, il n'y a pas d'exercice meilleur que la traduction' (262). 'Pour l'assouplissement de l'esprit, la connaissance du latin est de plus grand profit que celle des langues modernes' (264). 'L'étude du latin . . . est indispensable pour maintenir entre les langues modernes un reste d'unité' (266).

There are however some statements to which in one way or another the reviewer would take exception. 'Le français se parle au Canada' (19): this statement, made without qualification, is misleading, since it gives the impression that French is the usual language of Canada, instead of that of one-third of the population, and of this third more than half are bilingual, French and English (see pages 475 and 479). That French is, of the Romanic languages, the most different from Latin and thereby from all the other modern Romance languages (23), is questionable; Rumanian is in vocabulary, and to the eye, if not to the ear, the most divergent. To speak of Yiddish as a German dialect written in Hebrew characters (25) is to omit the Spanish Yiddish of Salonica and elsewhere, with a large colony in New York City; there are also forms of Yiddish containing much Russian and, in this country, containing English: the reviewer has seen a sign in Hebrew characters reading *manufactory fuer buttons*. We find the statements that in North America 'les premiers colons anglais sont maintenant noyés dans des masses d'immigrants de toutes sortes', and that English has become the universal language of North America, 'bien que la grande majorité des occupants actuels des États-Unis et du Dominion britannique du Canada descendent uniquement ou partiellement de parents ou d'aïeux dont la langue n'était pas l'anglais' (69); Professor Meillet is here using 'l'Amérique du Nord' in its common usage to denote America north of Mexico, instead of in its more extended and correct sense. But it is probable that the descendants of English-speaking ancestors are in this country still in a slight majority, according to recent careful calculations. In attributing to America south of the

United States only two official languages, Spanish and Portuguese (70), Professor Meillet overlooks the Guianas—French, Dutch, and English—as well as the French-speaking republic of Hayti and the English and French islands of the West Indies. With regard to the languages in Switzerland, one should add the extension of Italian along the line of the St. Gotthard railway north of the tunnel, into German-speaking territory, as a modification of the strict geographic separation emphasized by the author (184). That the French Canadians no longer participate in the current of French culture (244) may be true in large degree, but an organized effort is being made to knit the bonds with the French of France: see V. Forbin's *17000 Km. de Film au Canada* (1928); the outcome of this movement may be gratifying to French hearts, but may also produce a dangerous split in Canadian national unity, according to Professor Meillet's own tenets (Ch. 30). That the German immigrants into the United States have learned to speak English (255), is true only in part; there are many families and communities in which German is the ordinary language, persisting from generation to generation, and English is little used or not known at all.

But the volume is so rich in the fruits of its author's extensive and minute linguistic learning, so permeated with his keen sense of values, so stimulating to the reader, that it should be read and digested by every serious student of linguistics.

The second part of the volume (291-484), by Monsieur Tesnière, gives a careful estimate of the number of persons speaking each language in every country of Europe, on December 31, 1926; this is followed by a brief statistical estimate of the speakers of the chief languages throughout the world. One might note that Chinese is first, with 400 millions, and English second, with 170 millions. On page 331, there is an incorrect percentage, giving a total of 101% in the first column. In calculating the decrease of the number of persons in Scotland and the Hebrides who speak only Erse (333), the author might have admitted a slight tendency toward geometrical rather than arithmetical progression, which would have postponed slightly the date of 1931 which he sets for the disappearance of the last speakers of Erse without knowledge of English. But this part of the volume also is of great value for reference, as the calculations of the numbers of speakers of each language seem to have been made by a valid method.

ROLAND G. KENT

English Influence on Japanese. By SANKI ICHIKAWA. Extracted from *Studies in English Literature*, Vol. VIII, No. 2, pp. 165-208. Tokyo: Kenkyusha, April, 1928.

'Of the various European languages which have left a mark on the Japanese vocabulary, English is by far the most important, and its future influence will probably be such that not only words and expressions will continue to be borrowed in greater numbers, but even the structure and the grammar of the Japanese language will be considerably modified.' Thus speaks our fellow-member Professor Ichikawa in his valuable treatise, in which he lists about 1400 English words which have found acceptance in Japanese. He classifies them in semantic groups (Food and Drink; Clothing and Toilet; etc.) and gives the Japanese pronunciation when it varies notably from that of English.

These variations result from the smaller variety of vowel sounds in Japanese, from the absence of consonant-groups and of final consonants, from the lack of the syllables *ti di tu du*, from the non-use of certain other sounds. Thus *plot* becomes *purotto*, *list* becomes *risuto*, and so on. Naturally, those who have some knowledge of English use English sounds not native to Japanese, even as English-speakers will use [ü] and [x] in borrowed words that are not thoroughly naturalized, if they can pronounce them.

Sections on these sound-variations and on the changes in syntax and idiom as a result of English influence, conclude the treatise. Professor Ichikawa expects this borrowing to be of advantage to the Japanese language; certainly the career of English itself, with its high percentage of words from Latin sources, justifies this expectation.

ROLAND G. KENT.

Sprache und Persönlichkeit: der Sinn komparativischer Personalbezeichnungen. Pp. 23. By KURT STEGMANN VON PRITZWALD. Jena: Frommannsche Buchhandlung (Walter Beidermann), 1927.

The author deals with the use and psychological significance of certain words of comparative form, applied to persons: notably Greek *πρεσβύτερος*, Latin *seniores*, *juniores*, *maiores*, OHG *heriro* = NHG *Herr*, NHG *Eltern*, with certain superlatives such as Gothic *sinista*, OHG *heristo*, *furisto* = NHG *Fürst*. Such comparatives, he finds, develop from contrasts in time, place, rank, and the contrasted ideas form new relations with lapse of time. An interesting point is that the Greek *πρεσβύτερος*, denoting the Jewish High-Priest, indicates by the comparative form the essential democracy of the Greeks, but its translation

by Wulfilā into Gothic *sinista*, a superlative, is a sign of the absolutism of the social structure of the Germanic world.

The whole treatise abounds in keen observations, but is marred by too frequent misprints. But then it is only an advance section of a larger volume, a *Dankesgabe für Albert Leitzmann*, edited by Fritz Braun and the present author, to appear as a separate volume of the *Jenaer Germanistische Forschungen*, in which a few other articles of linguistic interest will be found.

ROLAND G. KENT.

NOTES AND PERSONALIA

PLINY EARLE GODDARD, a Signer of the Call that led to the formation of the LINGUISTIC SOCIETY OF AMERICA, and a Foundation Member of the same, died at Newtown, Connecticut, on July 13, in his fifty-ninth year.

He was born at Lewiston, Maine, on August 24, 1869. He received the degrees of A.B. and A.M. from Earlham College in 1892 and 1896, and that of Ph.D. from the University of California in 1904, where he was Instructor in Anthropology from 1901 to 1906, and Assistant Professor from 1906 to 1909. In 1909 he went to New York as Assistant Curator of Anthropology at the American Museum of Natural History; he was made Associate Curator in 1910, and Curator of Ethnology in 1914, a position which he held until his death. The effective arrangement of the exhibition halls of ethnology at the Museum, which has aroused the admiration of great numbers of visitors, was the work of Dr. Goddard. From 1915, he was also Lecturer on Anthropology at Columbia University.

Dr. Goddard was a member of the American Anthropological Association, the American Academy of Arts and Sciences, the American Association for the Advancement of Science, the American Folklore Society, and other scientific organizations. He had accepted an invitation to conduct courses in the Linguistic Institute this past summer, but asked to be relieved on account of other duties, and his place was taken by Dr. J. A. Mason. During the last months before his death, he had been busy making arrangements for the reception, at the Museum of which he was Curator, of the International Congress of Americanists in September; but his sudden death deprived him of the appreciation which would have been his due from the assembly.

Dr. Goddard was the author of many treatises on the American Indians, especially of those of the southwestern United States, and was joint editor, with Professor Franz Boas of Columbia University, of the *International Journal of American Linguistics*.

PROF. R.-M. S. HEFFNER sends the following report on the discussion of phonetic transcription at the First International Congress of Linguists:

This discussion took place in a plenary session and aroused the active interest of the entire Congress. The proposals presented by the Copenhagen Conference and embodied in its pamphlet: *Phonetic Transcription and Transliteration*, Oxford, 1926, were vigorously attacked by Dr. Forchhammer and defended by Professors Jespersen, Karlgren, and others. The net tangible result of this discussion was twofold. Acting upon the suggestion of Professor Meillet, the Congress requested the Copenhagen Conference to busy itself further with this problem and to invite additional scholars to participate in its deliberations, to the end that all interested branches of linguistic research shall be adequately represented in its conclusions. A second tangible result may be seen in the five specific recommendations made by Professor Karlgren, speaking in behalf of the Copenhagen Conference:

1. Circles beneath a consonant should be used to denote syllabic function, [vat̪] etc., and for no other purpose.
2. If a dot beneath a consonant is used, Ț, ȡ, etc., it should indicate supradental ('retroflex') articulation, and never be used for anything else.
3. Nasalized vowels should be indicated by a hook beneath the vowel in Polish fashion and in no other way. Never [ã, aⁿ] etc.
4. Fricatives (apart from those given in the Roman alphabet, s, z, f, v) should be rendered by Greek letters, ϕ, θ(θ), χ, β, δ, γ.
5. The symbols of the Association Internationale for palatal sounds should be considered too unsystematic and inconsistent to be used in scientific literature.

These proposals were not voted upon by the Congress, but were, in my opinion, favorably received by the majority of its members. They are presented here as an indication of the trend of opinion concerning those particular problems with which they deal. By implication they also¹ express Professor Karlgren's opinion as to the most important points at which the proposals of the Copenhagen Conference may be strengthened and made more definite.

THE CONFERENCE OF EXPERTS ON LINGUISTIC BIBLIOGRAPHY took place, as scheduled, on March 12 and 13, 1928, at the Institut International de Coopération Intellectuelle, in Paris; seventeen scholars from ten countries were in attendance. E. B. Babcock, delegate of the Linguistic Society of America, represented American scholarship; three

¹ Cf. The Proposals of the Copenhagen Conference, Articles 10, 15, 12, 19 and 16.

others, A. Debrunner, A. Meillet, and P. Rivet, were Honorary Members of the Linguistic Society. Monsieur Meillet was elected President of the Conference.

The Conference was held for the purpose of organizing, unifying, and completing bibliographical work in the linguistic field. The present main agencies were enumerated: *Indogermanisches Jahrbuch*, for Indo-European; *Oriental Bibliography*, for the Asiatic, African, and Oceanic fields, which stopped with 1911 but is now about to resume; and others in Finno-Ugrian and in American languages. The most important gap seemed to be the lack of a complete bibliography of the Romanic languages; such a bibliography ought to be divided into regional sections, undertaken by local scholars—Franco-Provençal, Iberian, Italian, Balkan, while the bibliography of general Romanic might be undertaken by representatives of some one region, such as France.

The financial and scholarly difficulties of the present bibliographies were discussed. Financially, there was need of more subscribers, to make them independent of subventions. Subventions, if obligating to a number of free copies in return, tend to reduce the number of paid subscribers. From the scholarly side, there is need of a greater number of scholars participating in the compiling of the bibliographies.

Coordination of existing agencies, it was thought, might be entrusted to a new organization formed for the purpose; or it might be put in the hands of the council of the League of Nations. No definite conclusion on this was reached, except that such a coordinating agency must not interfere with the autonomy of existing bibliographic organs, but should seek to find for all of them the needed scientific and financial aid.

The question was raised whether the bibliography of general linguistics should be made a separate publication, but the hope was expressed that its present incorporation in *Indogermanisches Jahrbuch* might be maintained at least until the facilities for separate appearance should be established.

It was agreed that approximately the form taken by bibliographic items in *IJ* was acceptable as a standard. Discussion followed as to whether the items should be followed by brief summaries and by critical approval or disapproval; but it was obvious that the additions to the mere titles represented other types of bibliography, all of them useful. So far as possible, items should be followed by the data of reviews; summaries, if given, should be more detailed if the originals were in less familiar languages. It was agreed that editors and publishers should be

requested to see that a summary of articles in periodicals be placed either at the beginning or at the end, not only to help bibliographers but to guide the readers; and that publishers of books be asked to include a summary of the contents in their announcements, and that these announcements should be sent to the Institut International de Coopération Intellectuelle, for the use of bibliographical organs. The high importance of uniformity in the signs and abbreviations used in bibliographies, was stressed.

The wish was expressed that in the larger public libraries some posts should be filled with workers who should include in their duties the preparation of scientific bibliographies.

The necessity of securing speedily adequate records of many languages now at the point of disappearance, was brought up, and it was agreed that this problem should be placed before the First International Congress of Linguists, to meet at The Hague a few weeks later.

JAMES R. WARE, Instructor in Latin in the University of Washington, has accepted an invitation to compile the bibliography and write concise reviews of American publications, both books and articles, concerning Buddhism in all its phases—art, archaeology, doctrines, folklore, history, linguistics, etc. These reviews will appear in the *Bibliographie Internationale d'Études Bouddhiques*, under the direction of Mademoiselle Marcelle Lalou, in the *Collection Buddhica*, of which the general editor is Professor J. Przyluski of the École des Langues Orientales Vivantes, at Paris. The first brochure will appear in October, 1929; it will contain an account of works on Buddhism, published in all countries between May 1928 and May 1929, and also a historical section devoted to the works of Léon Feer. Mr. Ware requests the cooperation of members of the LINGUISTIC SOCIETY in his compilation of American publications in the Buddhistic field.

EDWARD M. HINTON has returned from two years of study at Oxford, England, where he received the degree of B. Litt., and has gone to the University of Tennessee as Assistant Professor of English.

Dr. George William Small has gone from The Johns Hopkins University to the Department of English at the University of Washington, Seattle.

THE ADMINISTRATIVE COMMITTEE OF THE LINGUISTIC INSTITUTE is arranging courses for the session of 1929, which, like the past session,

will be held in New Haven. The Director of the Institute, Professor E. H. Sturtevant, Box 1849 Yale Station, New Haven, asks members of the Linguistic Society to notify him at once of subjects on which they would like to hear courses of lectures, that he may make an effort to secure instructors.

Subsequent to the last published list of new members, and up to September 18, the following new members have been received into the LINGUISTIC SOCIETY:

- Prof. Elizabeth Avery, Smith College, Northampton, Mass. (Spoken English)
Prof. Charles H. Grandgent, 107 Walker St., Cambridge, Mass. (Romance Langs., Harvard Univ.)
Mr. Mack Hall Griffin, Univ. of North Carolina, Chapel Hill, N. C. (Latin and Greek)
Dr. Archibald A. Hill, Univ. of Michigan, Ann Arbor, Mich. (English)
Mr. H. M. Poynter, Phelps House, Andover, Mass. (Latin, Phillips Academy)
Prof. Frank Otis Reed, Univ. of Arizona, Tucson, Ariz. (Spanish)
Dr. Karl Reuning, Kospothstr. 50, Breslau X, Germany. (Lektor für Anglistik, Univ. of Breslau)
Prof. Kenneth Scott, 1959 Yale Sta., New Haven, Conn. (Latin, Yale Univ.)
Mr. J. Frank Stimson, Boite 59, Papeete, Tahiti. (Research Assistant in Ethnology and Linguistics, Bishop Museum, Honolulu)
Mr. Arthur C. Streufert, Prairie View, Ill.
Mr. L. L. Stutzmann, 125 Railroad St., Palmyra, Pa. (German, Schuylkill Coll.)
Prof. T. Takehara, care of The Grolier Society, 18, Mac-Machi, Kobe, Japan.
Prof. Pauline Turnbull, Westhampton College, University of Richmond, Va. (Latin)

BOOKS RECEIVED

Under this heading will be acknowledged such works as seem to bear on "the advancement of the scientific study of language."

The publicity thus given is regarded as a full return for the presentation of the work. Under no circumstances is it possible to comply with the requests being made by certain publishers for the return of books not reviewed quickly.

Reviews will be published as circumstances permit. Copies of them will be sent to the publishers of the works reviewed; and it is hoped that they will then send a second copy to replace the one which will have become the property of the reviewer.

For further bibliographic information consult the annual list of Exchanges.

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